DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

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Procurement

C O P Y

12-2-46

CG 1ST CORPS

CG 98TH INFDIV/25th INFDIV/107TH MG GP
CG 24TH INFDIV/32ND INFDIV/95TH MG GP/94TH MG GP

PLAIN 121607/1 ROUTINE

EFFECTIVE IMMEDIATELY ALL GPA FORM NUMBER 2, WHOLE DOLLAR VALUE OF WHICH HAS BEEN REPORTED ON GPA FORM 3, WILL BE

MARKED QUOTE RECORDED UNQUOTE IN UPPER RIGHT CORNER OF THE FORM PRIOR TO FORWARDING OF RECORD COPY TO USASCOM C

Reproduced by 95th Military Government Group to:

29th Military Government Company
37th Military Government Company
92nd Military Government Group
93rd Military Government Group

121607/1 TOR: TT/1950-1/WAB

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

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CAPTAIN DiBartolo;

Here is the scoop as far as I can give it to you.

First--Sixth Army procedures will be followed on procurement matters pending the receipt of the new 8th Army manual. Read it and just try to figure it out.

Your procurements will be numbered and handled separately from mine. Your number will be as follows--~~XXXXXXX~~
QM-93-A-PD-1-46

At the end of each month the GPA Forms 1, 2, 3 will be forwarded to ~~I Corps~~ USASCON-C. I suggest that you hold the GPA #1 until it has been completed. A letter of transmittal showing those completed, those pending and those voided or canceled goes along with the forms. The GPA 3 is sent directly to I Corps, directly to USASCON-C and to the 95th Group.

Lt. Col. Aiken
Procurement Officer
Military Government Section
Headquarters, I Corps
APO 301
Kyoto

USASCON-C
Procurement Section
APO 404

95th Milt Govt Group
You Know Where

It is suggested that all using units (tactical) set up an maintain property records on all property that has been procured. Procured property becomes the property of the United States. It is anticipated that 8th Army will probably call for the establishment of accountability and responsibility by 1 Apr 46.

A complete price list is presently being prepared by 8th Army which should materially assist the appraisal of property procured. It is rumored that it will be completed by 15 Mar 46. "Cood Be"

If the proposed change goes through that gives you over unto the 92nd Group I'm not sure what you should do about your present set of numbers. I think probably you should start a new set with the numeral 92 instead of 93-A and close out your account as 93A . You will have to close out the 93-A series of course. In your initial letter of transmittal a paragraph explaining the use of the "A" is necessary so that USASCON-C will know what the scoop is.

attached are some dispatchs that somewhat modify the procurement manual.

This is about all I can think of at the moment of any import.

One other thing-----my baby can lick your baby and Kadish's baby with no strain and no pain. WHATTABOY!

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## RADIO MODIFICATIONS OF 6TH ARMY PROCUREMENT MANUAL

**No. 1** 18 January 1946

Procurement instructions and procedures outlined in 6th Army Procurement Manual as modified by subsequent directives, specifically Par. 1 Adm. Order 19/15 Hqs 6th Army, 19 Dec 45, will remain in effect in former 6th Army area pending receipt of further instructions. One signed copy of every future demand, receipt, and monthly report (GPA Forms 1, 2, and 3) will be forwarded by each reporting headquarters direct to Procurement Division, HQ's USASCON - C APO 404 by most expeditions suitable means.

**No. 2** 12 Feb. 1946

Effective immediately all GPA 2, whole dollar value of which has been reported on GPA 3, will be marked "Recorded" in upper right hand corner of form prior to forwarding of record copy to USASCOM C.

**No. 3** 5 Jan. 1946

The colume of procurement transactions with the Japanese should be reduced to the minimum, therefore procurement demands covering essential items of supply not obtainable from regular supply agencies will be coordinated, consolidated, and prepared by appropriate staff sections (Engr., QM, Signal Corps, Ord., Medical, Transportation Corps or Spec. Serv) and referred to local procurement section for final action. In cases in which the items of supply are not available in the immediate prefecture the procurement demand will be submitted to I Corps procurement section for dispositions, and not turned overto the prefectural authorities for processing between prefectures. Any comfort items for troops which have to be manufactured will first be submitted to the appropriate staff sections of I Corps for clearance. This action is necessary in order to prevent duplication of demands on the Japanese for items that Corps might have request for all its troops.

**No. 4** 24 Jan. 1946

Organization releasing or vacating property acquired from local Japanese souces, will notify procurement board thru which the property was secured at least seventy two hours prior to the date on which release is to be effective. This notice will be furnished in triplicate and include a complete inventory of such property, equipment and furnishings under consideration. Authorization for final release of real estate, facilities, equipment of furnishings will be granted by the CG I Cowps in each case. Procurement boards will not release Japanese military or naval properties without first obtaining the approval of the CG I Corps. Japanese authorities will be required to furnish adequate safe guards for all properties during any period of temporary vacancy.

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No. 5 21 Feb. 45

Reference is made to radio dated 24 January 1946, requiring prior permission of CG, First Corps for transfer or release of procured Japanese property. This directive is modified to the following extents that prior permission need be obtained only for (1) total or substantial release of any property; (s) for transfer between units of hotels and apartment houses; (3) for relase of Japanese military or naval properties. Authority to transfer or relase property other than exceptions noted above is delegated to local Military Government Procurement Boards within area to be affected. This information is to be communicated to all Military Government companies.

No. 6 23 Jan. 46

Part one, Sec. 8, Par. 2a, Proc. Manual, Hq 6thArmy, dated 1 Dec. 45, is amended to include the following items:

1. All foodstuffs not previously listed.
2. Salt
3. Charcoal
4. Clothing
5. Textiles commonly used in mfg. of clothing.
6. Household type furniture except from mfgs. or dealers stocks.
7. Fire fighting equipment.
8. Radio transmitting and receiving equipment and parts both broadcast and communications.
9. All telephone equipment including instruments, switchboards, carrier and repeater equipment.
10. Telephone cable indluding loop toll carrier and subscriber cable.

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No. 7

23 January 1946

It has come to the attention of this headquarters that crockery procured from Japanese sources is being utilized in company, troop and battery kitchens. Inasmuch as existing stocks of crockery throughout Japan are not sufficient to permit the use of subject items by all elements of the occupational forces and since such stocks are not of a proper quality to permit the maintenance of desired standards in unit mess halls and kitchens, this practice is not deemed desirable. It is desired that units utilizing crockery procured from Japanese sources eliminate the use thereof as such crockery is expended. It is further desired that no procurement of crockery be consummated in the future. Every effort is being made by this headquarters to complete the procurement and issue of compartmented trays to all elements of this command. Subject compartmented tray used in conjunction with cup canteen and mess-kit knife, fork and spoon will be standard equipment for all company, troop and battery kitchens of this command as soon as issue of same is completed to all elements.

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Tele Procurement

COPY

12-2-46

CG 1ST CORPS

CG 98TH INFDIV/25th INFDIV/107TH MG GP
CG 24TH INFDIV/32ND INFDIV/95TH MG GP/94TH MG GP

PLAIN 121607/1 ROUTINE

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Reproduced by 95th Military Government Group to:

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121607/1 TOR: TT/1950-1/WAB

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File Procurement

SD/tk

HEADQUARTERS
93RD HEADQUARTERS & HEADQUARTERS DETACHMENT
MILITARY GOVERNMENT GROUP, OITA DETACHMENT, OITA, JAPAN

Serial No : 6032

19 February, 1946

Subject : Procurement.

To : Commanding General, ASCOM_C, APO 404.

Thru : Commanding General, Second Marine Division,
Attention: Procurement Officer.

1. A review of procured materials, supplies, and facilities currently in use by the Occupation Forces in Oita Prefecture reveals that the following were unnecessarily procured and are incorrectly carried as such:

| Demand No. | Description | Owner |
|---|---|---|
| 501599 | 7 Electric Heaters | 2nd Tokyo Army Arsenal |
| 504109 | Signal Equipment | Saeki Naval Base |
| 504258 | Fire Truck (1) | Japanese Military (Specific Organization Unknown) |
| 504634 | Plumbing Supplies | 2nd Tokyo Arsenal |
| Unknown | 100 Electric Heaters | 1409th Engineers, Fukuoka |

2. Inasmuch as the above items fall under the classification of enemy equipment, no procurement was necessary. It is therefore requested that this Headquarters be advised on procedure to be followed for cancellation of these procurements.

FOR THE COMMANDING OFFICER:

SALVATORE DI BARTOLO
1ST LT. CAC
PROCUREMENT OFFICER

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HEADQUARTERS SIXTH ARMY
A.P.O. 442

# PROCUREMENT MANUAL

## EXTRACTS OF

## P A R T  I

## I N S T R U C T I O N S  A N D  M E T H O D S

### Demands, Inventories, Appraisals, Etc.

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HEADQUARTERS SIXTH ARMY
A.P.O. 442

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HEADQUARTERS SIXTH ARMY
A.P.O. 442

1 December 1945

## S E C T I O N 1

### General

******* ******* ******* ******* ******* *******

4. Geographical Locations.

a. Geographical locations referred to in procurement instructions and communications will be by ken or fu, shi or gun, machi or mura, street and house number. Military grid coordinates will be used for additional clarity.

b. Reference map will be * * * * *, 1:250,000 * * *

c. Local Japanese police can assist in furnishing the correct address.

## S E C T I O N 2

### Procurement Procedure

******* ******* ******* ******* ******* *******

2. Procurement Demand Channels.

a. Requisitions for Japanese armed force equipment, supplies, stores and accessories (see Section 6, paragraph 8 for complete description) will not be processed through normal procurement channels, but will be processed in accordance with the instructions of the command regarding the disposal of enemy equipment.

b. Units desiring supplies will process their requests to the usual supply agency or designated representative agency, handling that particular class of supply. The responsible supply agency will initiate the procurement demand to the procurement agency. However, where the supply agency has previously advised that it will be necessary to procure the supplies from the Japanese government, the requesting unit may initiate the procurement demand, obtain the indorsement of the supply agency and forward the demand to the procurement agency.

c. Units desiring real estate will process their requests directly to the procurement agency. It will be the responsibility of such units to obtain the concurrence and approval of their respective staff sections as to the authority for and suitability of the property desired.

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d. Units desiring construction will process their requests through normal staff channels to the responsible staff section or designated representative agency concerned, (Engineer or Signal) rather than to the procurement agency. The responsible staff section after usual staff processing will initiate the procurement demand to the procurement agency. At the discretion of the responsible staff section, the requesting unit may initiate the procurement demand, obtain the indorsement of the responsible staff section and forward the demand to the procurement agency.

e. In so far as possible requesting units will avoid requisitioning materials and manpower, but will requisition completed facilities, or completed jobs instead.

f. In requesting real estate, units should state on the procurement demand the specific alterations and work to be performed, utility services to be furnished, and desired condition of the property before it will be acceptable. A statement will be included as to the amount and type of maintenance, service, or operating personnel desired.

g. It will be a function of supply agencies to consolidate and anticipate unit requests for supplies in order to facilitate their procurement from Japanese civilian sources.

h. Every attempt will be made to obtain required supplies from Japanese military and naval stocks before initiating a procurement demand on civilian sources of supply.

i. It will be a function of the construction staff sections to provide follow-up and inspection service of construction projects. However, construction staff sections will keep the procurement agency advised of unusual cases of delay in the performance of the work in order that corrective action may be taken through the Japanese Central Liaison Agency.

## S E C T I O N 3

### Procedure for Requesting Agency

1. Demand. Units and staff sections desiring Japanese supplies, real estate, construction and services will take the following action:

a. Accomplish procurement demand on GPA Form 1 as prescribed in Section 9.

b. Sign all copies.

c. Process through channels as described in Section 2, paragraph 2.

d. If necessary, obtain signed indorsement of responsible staff section on all copies.

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e. Forward demand form in quintuplicate to procurement agency.

f. Retain one copy in file.

2. Notification of Compliance. Upon receipt of notification to take possession of property, the requesting agency will take the following action:

a. In accordance with delivery instructions on demand form or with subsequent verbal agreement, take possession of the desired property.

b. At the time of taking possession, all five copies of the receipt form will be signed by an officer representative of the requesting agency and by a responsible representative of the Japanese Liaison Agency.

c. In the case of supplies, the receipt form will be verified by both representatives for accuracy in nomenclature and quantity.

d. In the case of real estate, there will be attached to the receipt form, a reconciliated inventory of the removable property, verified for accuracy in nomenclature and quantity, by both representatives.

e. In the case of construction and services, the receipt form will be verified by both representatives for agreement with specifications and conditions.

f. The signatures of the representatives will constitute agreement as to the delivery and receipt of the property as specified on the receipt form.

g. Items for which agreement can not be reached will be so noted and a report of the facts made on the reverse of the receipt form.

h. In cases of partial delivery, items not delivered will be lined out and initialed by both representatives and the receipt noted "Partial Delivery".

i. At the time of subsequent deliveries, the Japanese Liaison Agency will present additional receipts in five copies, all of which will be noted "Partial Delivery" except that the receipt for the delivery which completes the demand will be noted "Final Delivery".

3. Receipt. When the receipt has been properly verified and executed by both representatives the requesting agency will leave one signed copy of the receipt and inventory with the Japanese supplier, property owner, or contractor, retain one signed copy of the receipt and inventory in their files, and forward the remaining three signed copies with two signed copies of the inventory to the procurement agency.

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4. Transfer of Accountability. If by reason of vacating real estate or of transferring possession of removable property, a unit desires to transfer accountability of property, in whole or in part, to another unit, the following action will be taken:

a. The units will make a joint verification of the property inventory.

b. In the event that the original unit's copy of the inventory has been lost, access may be had to the files of the procurement agency.

c. The succeeding unit will give a receipt in a form mutually agreeable to both units, to the original unit.

d. Any discrepancies between the original inventory and the inventory at the time of transfer of the property, the name, rank, and title of the responsible officer of the succeeding unit and the unit designation of the succeeding unit will be reported, orally or in writing, to the procurement agency for entry in their records.

5. Release. A unit desiring to release or return property in whole or in part to the Japanese will take the following action:

a. Notify the procurement agency of the intention to vacate and designate a time and place of meeting of a unit officer and a representative of the Japanese Liaison Agency.

b. At the time of meeting, prepare a final inventory of the property in triplicate.

c. All copies of the inventory form will be signed by both the unit and Japanese Liaison Agency representatives.

d. Reconcile final inventory with original inventory. If the original inventory has been lost, a copy may be made of the original inventory in the files of the procurement agency.

e. Prepare statement of discrepancies, if any, between original and final inventories, with explanation thereof.

f. Prepare statement of alterations and changes made to property, including therein statement, if appropriate, of any factors which might tend to change the original value of the property.

g. Prepare a sketch or plot plan of property to be released and property to be retained.

h. Accomplish letter of release on form PS-15 as prescribed in Section 9.

i. Forward letter of release in triplicate, all copies signed

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and inclosures in duplicate, all copies signed, to the procurement agency.

6. Minor Release. Small quantities of non-expendable supplies may be turned in by using units to the appropriate supply agency or its designated representative, who will initiate periodic consolidated releases of accumulated Japanese procured property.

## S E C T I O N 4

## Procedure for Procurement Agency

1. Demands. Upon receipt of a procurement demand, the procurement agency will take the following action:

a. Check to see that the form has been completely and correctly accomplished.

b. When more than one unit or staff section requests the identical property, the determination as to which agency will receive the property will be as follows:

(1) By mutual agreement between the requesting agencies.

(2) By decision of the procurement agency based on priorities previously established by the Commanding General of the command.

(3) By submission to the Commanding General for decision.

c. Enter on form, necessary information as prescribed in Section 9.

d. Sign all copies.

e. Forward demand form in quadruplicate to Japanese Liaison Agency.

f. Retain one copy in files.

******* ******* ******* ******* ******* *******

3. Notification of Compliance.. Upon receipt of two signed copies of demand form and five unsigned copies of receipt form from the Japanese Liaison Agency, the procurement agency will take the following action:

a. Forward one signed copy of demand form to General Procurement Agent through channels.

b. Remove and destroy retained unsigned copy of demand form in files.

c. File one signed copy of the demand form, to which should be stapled any associated data such as sketches, plot plans, memoranda, addenda, inventories, etc.

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d. Forward five unsigned copies of receipt form to requesting agency as notification of compliance with demand.

4. Receipt. Upon receipt of the three signed copies of the receipt form, the procurement agency will take the following action:

a. Forward one signed copy of the receipt to the Japanese Liaison Agency.

b. Make an appraisal of the fair value of the property * * * * on forms as described in Section 9.

c. Enter the fair value of the property on the two remaining signed copies of the receipt form.

d. Forward one signed copy of the receipt form to the General Procurement Agent through channels.

e. Retain one signed copy of the receipt form and all appraisal work sheets and memoranda in files.

5. Report. At the end of each month the procurement agency will submit a report of commodities or services procured from the Japanese as follows:

a. Obtain monthly report on GPA Form 3 from subordinate commands.

b. Obtain fair value data on GPA Form 3 from other staff sections of the command having procurement responsibilities (Engineer, Signal, and Transportation).

c. Obtain fair value data for procurement agency's own area of responsibility from filed receipts (GPA Form 2)

d. Prepare monthly report on GPA Form 3 as prescribed in Section 9, consolidating fair value data of subordinate commands, other staff sections and own procurement agency.

e. Check to see that entries on the report have been substantiated by prior forwarding of GPA Forms 1 and 2.

f. Add to or deduct from figures shown in report, amounts of under or over appraisals recorded on report of previous month.

g. Check to see that the procurement demand number sequence is complete for the period of the report by notifying the next higher headquarters of all demand numbers which have been voided (such as in the case of procurement demands which have been withdrawn or cancelled or demand numbers which were erroneously assigned to demands).

h. Forward single copy of report to next higher headquarters by 5th day of the succeeding month, retaining one copy for file.

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6. Notification of Intent to Release. Upon notification from unit of desire to release property, the procurement agency will notify the Japanese Liaison Agency to have a responsible representative meet with the unit officer at the designated time and place for the purpose of making a final inventory of the property to be released.

7. Release. Upon receipt of letter of release, the procurement agency will act as follows:

a. Check to determine that all necessary data has been entered on the letter of release form and that the associated data, such as the sketch, final inventory, statement of discrepancies, and statement of alterations and changes are attached and complete.

b. Forward letter of release in duplicate with single copy of each inclosure, all copies signed, to Japanese Liaison Agency.

c. Upon return of one completely signed copy of letter of release from which the inclosures have been withdrawn by the Japanese Liaison Agency, staple with duplicate set of enclosures to original procurement demand. It is not necessary to forward copies of the release to higher headquarters.

d. Review the statement of discrepancies between original and final inventory and from the data furnished determine whether the loss of the property or the depreciation of the property, beyond a reasonable amount for fair wear and tear, was the responsibility of the using agency or of the Japanese property owner.

e. When it is the opinion of the procurement agency that the responsibility for the loss or damage lies with the Japanese property owner, the statement of discrepancies will be so noted with reasons therefore, and no further action taken.

f. When it is the opinion of the procurement agency that the responsibility for the loss or damage lies with the using agency, the statement of discrepancies will be so noted with reasons therefore, and a procurement demand bearing an appropriate notation to indicate that the demand is not a request for additional property, will be initiated by the procurement agency for the lost or damaged property.

g. In the case of the release of non-expendable supplies, the original appraisal will be examined to determine whether or not the proper basis was used in making the appraisal (see paragraph 4e, Section 6).

h. Where the basis selected for the original appraisal was incorrect, there will be entered on the release form suitable adjustments to the appraisal.

i. When the attached statement of alterations and changes made to the property indicate appreciation in the value of the

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property not previously accounted for by a construction procurement demand or indicate a depreciation beyond fair wear and tear not accounted for by any other means, suitable adjustment in the original appraisal will be made on the release form.

j. The subsequent monthly report on GPA Form 3 will reflect all changes in appraisals made as a result of releases.

## S E C T I O N 5

### Procedure for Liaison Agency

1. Demand. Upon receipt of a procurement demand, the Japanese Liaison Agency will take the following action:

a. Locate and arrange with property owner for transfer of property.

b. Make delivery of property, if so prescribed by deliery instructions on demand form.

c. Limit procurement of property to area of responsibility
* * * *.

d. Notify the procurement agency immediately by personal representative, if unable to comply with the procurement, giving the reasons thereof..

e. As soon as property transfer arrangements have been completed, sign all four copies of the demand form.

2. Notification of Compliance. When the desired property is ready for delivery or pick up, the Japanese Liaison Agency will take the following action:

a. Prepare receipt on GPA Form 2 as prescribed in Section 9.

b. Forward unsigned receipt form in five copies to procurement agency as notification that delivery can be effected as prescribed by demand form.

c. Attach to receipt form two signed copies of demand.

d. Retain two signed copies of demand form and one unsigned copy of receipt form in files.

3. Transfer of Property. In accordance with delivery instructions on demand form or with subsequent verbal agreement, transfer possession of the property as follows:

a. At the time of transferring possession all five copies of the receipt form, previously prepared by the Japanese Liaison Agency, and in the possesion of the requesting agency, will be signed by an officer representative of the requesting agency and by a responsible representative of the Japanese Liaison Agency.

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b. In the case of supplies, the receipt form will be verified by both representatives for accuracy in nomenclature and quantity.

c. In the case of real estate, there will be attached to the receipt form a reconciliated inventory of the removable property, verified for accuracy in nomenclature and quantity, by both representatives.

d. In the case of construction and services, the receipt form will be verified by both representatives for agreement with specifications and conditions.

e. The signatures of the representatives will constitute agreement as to the delivery and receipt of the property as specified on the receipt form.

f. Items for which agreement can not be reached will be so noted and a report of the facts made on the reverse of the receipt form.

g. In cases of partial delivery, items not delivered will be lined out and initialed by both representatives and the receipt noted "Partial Delivery".

h. At the time of subsequent deliveries, the Japanese Liaison Agency will present additional receipts in five copies, all of which will be noted "Partial Delivery" except that the receipt for the delivery which completes the demand will be noted "Final Delivery".

i. After each transfer of property four signed copies of the receipt form will be turned over to the requesting agency and one signed copy will be retained by the Japanese supplier, property owner, or contractor.

j. One signed copy of the receipt form will be forwarded to the Japanese Liaison Agency by the procurement agency.

4. Release. Upon receipt of a letter of release, detach one copy of the letter, sign, and return to the procurement agency.

## S E C T I O N 6

## Appraisal Procedure

******* ******* ******* ******* ******* *******

2. Basic Costs.

a. In general appraisals of Japanese procured supplies, real estate, construction, and services should be based on one of the following basic costs:

(1) Official Japanese government prices (kotei kakaku), as of 15 August 1945 which were published by the

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Japanese Government in their official gazette.

(2) Semi-official prices (kyotei kakaku), as of 15 August 1945 which were established by Japanese trade or commodity associations or guilds and sanctioned by Japanese government.

(3) Unofficial prices (teishi kakaku) which were not regulated or established by the Japanese government or Japanese commodity associations but which were prevailing on 15 August 1945.

(4) Assumed prices as of 15 August 1945 established by procurement section appraisers based on the official, semi-official and unofficial prices or other methods of evaluation.

b. Japanese yen value will be converted to American dollar value at the ratio of 15 yen to 1 dollar.

c. Prices of supplies will reflect whether delivery was effected by Japanese or American transportation.

d. Rentals will reflect whether maintenence and operation is performed by Japanese or American personnel.

******* ******* ******* ******* ******* *******

4. Methods for Appraisal of Supplies.

******* ******* ******** ******* ******* *******

e. Rentals as per Real Estate Methods. In the case of those supply items which will be returned or released to the Japanese, i.e., items which are not expended or consumed during American use or items for which it is expected that at the time of release the percentage of depreciation will be less than the whole, fair value should be calculated on a rental or accrual basis * * * rather than total cost. If at the time of release, it is decided that items, the fair value of which were calculated on a rental basis, should have been based on total cost, or vice versa, then appropriate debit or credit should be made on the release form.

******* ******* ******* ******* ******* *******

8. Appraisals Unnecessary.

a. Appraisals of enemy equipment which is defined as all arms, ammunition, explosives, military equipment, stores and supplies, and other implements of war of all kinds and any equipment or other property belonging to, used by, or intended for use by Japanese armed forces and Japanese controlled armed forces or any members thereof in connection with their operations, are unnecessary. (Procurement Demand forms are also unnecessary in these cases).

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b. Enemy equipment, supplies, stores, and accessories, not of a strictly military character, in the process of manufacture of commercial equipment, supplies, stores and accessories used in the manufacture of enemy equipment which were not physically in the possession of the Japanese armed forces, but were located in privately owned and operated war plants or factories, should be appraised. (Procurement Demand forms should be used in these cases).

c. All real estate used as military and naval installations and establishments, including cantonments, barracks, camp sites, supply or storage depots, military and naval (but not civilian) schools, airfields and seaplane bases, naval bases, military research establishments, permanent and temporary land and coast fortifications, fortresses, and military, naval, or government owned or operated factories or plants will not be appraised. (However, Procurement Demand forms will be used in these cases).

******** ******** ******** ******** ******** ********

## S E C T I O N 7

### Items of Procurement

1. Policy.

a. It is the declared policy of the Supreme Commander that Japan will be expected to provide supplies, facilities, and services to meet the needs of the occupying forces to the extent that this can be effected without causing starvation, widespread disease or acute physical distress.

b. Due to the destruction of the Japanese economy, procurement demands will not be made for large quantities of supplies which would tend to cause these conditions.

c. Certain items, the procurement of which might tend to disturb this policy, have been placed in a restricted category (see Section 8, Items Requiring Prior Approval).

******** ******** ******** ******** ******** *****

5. Expediting Procurement.

******** ******** ******** ******** ******** *****

c. The elimination of many small demands and substituting therefore a few consolidated demands will do much to improve the efficiency of the Japanese Liaison Agency.

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# S E C T I O N 8

## Items Requiring Prior Approval

1. General.

a. In order that the procurement of Japanese facilities by the occupying forces will not operate to cause starvation, widespread disease, or acute physical distress nor to cause the dislocation of the Japanese economy, the procurement of certain facilities are placed in a restricted category. These restricted items are enumerated in the paragraphs below and include those items listed in SCAP "Controlled Critical Items (List #1)." Additional lists will be included as issued.

b. From time to time higher authority assures the Japanese government and occassionally foreign nationals that certain properties will not be taken over by the occupying forces. Notification of such commitments will be distributed to all procurement agencies.

c. Pin pointed maps and indexed files should be used to reflect the location and type of such properties in order that the procurement isn't unwittingly affected.

2. SCAP Approval.

a. The following items will not be procured without obtaining prior authorization from SCAP through channels:

(1) Religious institutions, national shrines, temples, buildings, and areas of worship.

(2) Property, real or personal, occupied or owned by members of the royal family.

(3) Educational institutions such as schools, colleges, and universities, but not including commercial, trade, military, and naval schools.

(4) Medical supplies and equipment.

(5) Dental supplies and equipment.

(6) Rice.

(7) Milk (fresh or processed).

(8) Fish.

(9) Petroleum products (gasoline, lubricating oils, and greases, etc).

(10) Vehicles (passenger cars, trucks, bicycles, accessories, spare parts, tools, etc.).

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(11) Tires and tubes.

(12) Radio receivers.

(13) Emergency cash purchases in excess of 3000 yen.

95th MG NOTE: By radio KFX 3735 from Headquarters I Corps the following items have been added to this list.

(14) All food stuffs not previously listed.

(15) Salt.

(16) Charcoal.

(17) Clothing.

(18) Textiles commonly used in mfg. of clothing.

(19) House type furniture except from manufacturer or dealers stocks.

(20) Fire fighting equipment.

(21) Radio transmitting and receiving equipment and parts both broadcast and communication.

(22) All telephone equipment.

(23) Telephone cable including loop tool carrier and sub scriber cable.

3. Sixth Army Approval.

a. The following items will not be procured without obtaining prior authorization from Hq Sixth Army through channels:

(1) Blankets.

(2) Property, real or personal, occupied or owned by foreign national individuals or corporations.

(3) Objects of art, museum pieces, heirlooms.

(4) Items, the value of which is greater than that normally expended for similar purposes such as high grade china for messes, expensive carpeting for quarters, etc. (95th MG Note: Crockery procurements prohibited).

(5) Emergency cash purchases in any amount.

4. Commanding General Approval.

a. The following items will not be procured without obtaining prior authorization from the Commanding General of the particular

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command desiring the facility:

(1) Hospitals, except strictly military or naval hospitals.

(2) Dispensaries, clinics, medical laboratories.

(3) Government installations in use, such as office buildings, shops, factories, etc.

(4) Factories and plants producing foodstuffs, clothing, medical supplies, and other essential commodities for civilian population needs.

(5) Supply and distribution facilities for food, shelter, clothing, and medical supplies required by civilian population.

(6) Surplus items of perishable foodstuffs not susceptible of civilian distribution.

5. Justification for Request.

a. Requests to higher headquarters for approval to procure restricted items will contain complete information substantiating military necessity therefor.

b. Statements of local government officials indicating that interference to local economy will or will not be caused by the procurement of the item in question, should be attached when available. Such statements should contain reasons for belief that interference will result.

## S E C T I O N 9

### Forms

******* ******* ******* ******* ******* ****

2. Procurement Demand, GPA Form 1.

a. Requesting Agency. The following data will be entered on the form by the requesting agency:

(1) Page number.
(2) Date procurement demand is forwarded.
(3) Numerical sequence of items.
(4) Quantity of each item.
(5) Detailed description of the supply, real estate, construction, or service desired, including whenever possible, the following:

(a) Name of item in English. In the case of real estate the type of property should be stated

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such as private residence, office building, warehouse, open storage area, etc.

(b) Name of item in Japanese (Romanji).

(c) Description - grade - type - quality.

(d) Federal stock or SNL number, if known.

(e) Reference to attached sketches, plot plans, specifications, maps, inventories, etc.

(f) If item has already been received, include appropriate statement herein.

(g) Limit a single procurement demand to one type of supply, one type of procurement, and one location, e.g., Engineer and Quartermaster supplies should not be on the same procurement demand form; supplies and real estate should not be on the same procurement demand; and supplies or real estate properties at more than one location should not be on the same procurement demand.

(6) Signature, typewritten name and rank of commanding officer of requesting agency and unit designation.

(7) Date and time delivery is desired. It is not possible to expect the Japanese Liaison Agency to produce the desired items in less than three days from date of receipt of the demand. Earlier deliveries will be confined to emergency demands only.

(8) Geographical location by fu or ken, shi or gun, machi or mura, street and house number, of the particular property desired.

(9) Packing instructions, if any, and agency, American or Japanese, which will effect delivery.

(10) Organization, location, and telephone number of agency to receive property. Enter here, also, the name of officer who will take actual possession.

b. Supply or Construction Agency. The following data will be entered on the form by the supply or construction agency approving the demand for procurement:

(1) Signature, typewritten name and rank of responsible officer of supply or construction agency and unit designation.

c. Procurement Agency. The following data will be entered on the form by the procurement agency:

(1) Procurement demand number consisting of arm or service, area designation, demand number, and fiscal year, e.g., the twenty second demand made by the Sixth Army Procurement Section involving quarters, shops, headquarters, and vehicle park for an ordnance repair company including removable property already on the premises, would be, CE-6A-PD-22-46.

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(a) By arm or service is meant that arm or service which normally handles the supply, service, or facility required. Real estate - Corps of Engineers; desks and office supplies - Quartermaster, etc.

(b) Area designations for procurement agencies of all commands are listed in Section 10.

(c) To the area designation of the procurement agency of each command there will be added the suffix letter T, S, or E to indicate procurement demands initiated by and reserved to the Transportation, Signal, or Engineer Sections of each command, e.g., 6AT would indicate a procurement demand originated by Sixth Army Transportation Section for passenger or freight train service. See Incl 5 to Adm O 19, Ho Sixth Army for procurement responsibilities of other staff sections.

(d) Each procurement agency will have only one sequence of numbers starting with number one for the first procurement demand of the fiscal year, rather than a separate sequence for each arm or service, e.g., demand numbers for a particular procurement agency might run CE-6A-PD-1-46, CE-6A-PD-2-46, QM-6A-PD-3-46, TC-6A-PD-4-46, TC-6AT-PD-5-46, etc.

(e) It should be noted that the fiscal year 1946 started 1 July 1945.

(2) Leave blank.

(3) Office file number, if not filed by demand number.

(4) Date forwarded to Japanese Liaison Agency.

(5) Signature, typewritten name, and rank of procurement officer and procurement agency designation.

d. Procurement agency. In addition to the data required to be entered on the form by the procurement agency by paragraph c above, the procurement agency will enter the data required by paragraph a above in those cases where the procurement demand is initiated by the procurement agency as a result of lost or damaged property (see Section 4 paragraph 7f).

(1) Statement, "Make no delivery. Demand covers property lost of damaged".

e. Liaison agency. The following data will be entered on the form by the Japanese Liaison Agency:

(1) Office file number, if not filed by demand number.

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(2) Signature of responsible representative and name of Japanese agency and date demand is received.

3. Receipt, GPA Form 2.

a. Liaison Agency. The following data will be entered on the form by the Japanese Liaison Agency.

(1) Name of individual and firm name from whom property is being procured.

(2) Address where property is or was located.

(3) Procurement demand number as written or corresponding GPA Form 1.

(4) Numerical sequence of items corresponding to those given on GPA Form 1.

(5) Quantity as shown on GPA Form 1 corrected in accordance with deliveries that can be effected.

(6) Information as given on GPA Form 1 corrected or completed in cases of errors or omissions in accordance with deliveries that can be effected.

(7) One of the following notations, "Complete Delivery" (all items on demand, delivered and covered by one receipt), "Partial Delivery" (multiple deliveries, to be noted on all receipts except the last), or "Final Delivery" (multiple deliveries, to be noted on receipt which completes the demand).

b. Requesting agency. The following data will be entered on the form by the requesting agency at the time of transfer of possession of the property:

(1) Date and time of transfer of property.

(2) Verification of the quantities of each of the items listed. Incorrect quantities should be lined out, the proper figures entered, and the corrections initialed by both representatives.

(3) Verification of the name of the item, description, grade, type, and quality. Incorrect nomenclature should be lined out, the proper nomenclature entered, and the changes initialed by both representatives. Reference should be entered here of any inventories or other papers attached at this time.

(4) Statement regarding overall condition using one of the following terms (omit in cases of real estate, construction, and services):

(a) New

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(b) Used - good condition.

(c) Used - serviceable condition.

(d) Used - poor condition.

(e) Salvage.

(5) Signature, typewritten name, and rank of responsible officer receiving property and unit designation.

(6) Location where transfer of property takes place.

(7) Verification of statement as to partial or final delivery.

c. Liaison agency. The following data will be entered on the form by a responsible representative of the Japanese Liaison agency.

(1) Signature and name of government agency.

d. Procurement agency. The following data will be entered only on the procurement agency file copy and the copy forwarded to the General Procurement Agency:

(1) Unit price for each item in dollars.

(2) Price extensions in dollars.

(3) Total price in dollars.

(4) Notation in the case of rentals, "Monthly Rental".

4. Monthly Report, GPA Form 3.

a. Procurement agency. The following data will be entered on the form by the procurement agency from sources indicated:-

(1) Last day, month, and year for the period covered by the report.

(2) Name of the headquarters of which the procurement agency submitted the report is a part.

(3) Fair dollar value of supply items normally furnished by the various supply agencies, procured by the procurement agency from the Japanese civilian government. The amounts entered herein should consolidate the amounts reported by subordinate commands and the amounts of own procurement agency.

(4) Total fair dollar value of supplies of all supply agencies.

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(5) Fair dollar value of equipment and services normally furnished by the various supply agencies, procured by the procurement agency from the Japanese civilian government. The amounts entered herein should consolidate the amounts reported by subordinate commands and the amounts of own procurement agency.

(6) Fair dollar value of equipment, services, Corps of Engineer construction, and all real estate normally furnished by the Corps of Engineers supply and construction agencies procured by the procurement agency from the Japanese civilian government. The amounts entered herein should consolidate the amounts reported by subordinate commands and the amounts of own procurement agency. In addition there should be added to this amount the fair dollar value of services of public utilities, other than transportation or communication systems, procured directly by the Engineer Staff Section of the command from the Japanese civilian government (see Incl 5 to Adm O 19, Hq Sixth Army for direct procurement responsibilities of Engineer Section).

(7) Fair dollar value of equipment and services normally furnished by the Transportation Corps supply agency procured by the procurement agency from the Japanese civilian government. The amounts entered herein should consolidate the amounts reported by subordinate commands and the amounts of own procurement agency. In addition there should be added to this amount the fair dollar value of services of transportation from regional or national transportation systems procured directly by the Transportation Staff Section of the command from the Japanese civilian government. ****

(8) Fair dollar value of equipment, services, and Signal Corps construction normally furnished by the Signal Corps supply and construction agencies procured by the procurement agency from the Japanese civilian government. The amounts entered herein should consolidate the amounts reported by subordinate commands and the amounts of own procurement agency. In addition there should be added to this amount, the fair dollar value of services of communication systems procured directly by the Signal Staff Section of the command from the Japanese civilian government.
* * * *

(9) Total fair dollar value of equipment, services, construction, and real estate of all supply and construction agencies.

(10) Actual dollar value of all cash purchases made in yen and paid on standard voucher form by the various supply agencies.

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(11) Total actual dollar value of all cash purchases of all supply agencies.

****** ****** ****** ****** ****** ****

6. Letter of Release, PS-15.

a. The purpose of this form is to effect the partial or total release of Japanese supplies, real estate, equipment, or services in such a manner as to provide proper notification to the procurement and liaison agencies, to correct the monthly report of dollar value received from the Japanese government, and to relieve the using agency of responsibility and accountability for the property in use.

b. The form will be accomplished as indicated by the context of the wording with particular attention to the following:

(1) Demand number should be that used on the original procurement demand.

(2) The inappropriate term "partially" or "totally" should be lined out.

(3) The date of release should be the actual date the premises are vacated or the property returned.

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UNITED STATES ARMY

Hq._____

_____Sec.

_____
(Date)

SUBJECT: Release of Japanese Procured Property.

TO : Procurement Officer, Headquarters I Corps, Daiken Bldg., Kyoto, Japan. (APO 301)

1. The Japanese property procured by request of this office on Demand No._____will be (partially) (totally) released to the Japanese on_____. Sketch indicating property released and property retained is attached.

2. Signed final inventory of property at time of release, including statement of discrepancies, if any, between original and final inventory and statement of alterations and changes made to the property is attached.

_____

_____
COMMANDING

In triplicate w/incl in duplicate

PS-15

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Page No a(1)

PROCUREMENT DEMAND ON IMPERIAL JAPANESE GOVERNMENT

DEMAND NO. c(1)

DATE a(2) FILE NO. e(1)

P.D. REC'D BY e(2) Japanese Liaison Office
(Signature of Representative) (Date)

| ITEM NO. | QUANTITY | SUPPLY SERVICE OR REAL ESTATE |
|---|---|---|
| a (3) | a(4) | a(5) |
| | | d(1) |

Requested by:

a(6) Signature of CO.

Unit

Approved by:

b(1)

DELIVERY INSTRUCTIONS

DELIVERY REQUIRED a(7)

PLACE a (8)

PACKING INSTRUCTIONS a(9)

RECEIVING OFFICE TO BE CONTACTED UPON DELIVERY a (10)
(Organization) (Location) (Phone)

(Space for File and Reference for Use of P&C Office only)

Org. Req. c(2) File: c(3)

Date c(4) c(5)

GPA Form 1

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# RECEIPT FOR SUPPLY OR SERVICE

RECEIVED FROM a(1)

ADDRESS a(2) a(7) b(7)

DATE RECEIVED a(1)

IN RESPONSE TO PROCUREMENT DEMAND NO. a(3)

| ITEM No. | QUANTITY | SUPPLY OR SERVICE | (Leave columns blank (on copies for Japanese. | |
|---|---|---|---|---|
| a(4) | a(5) b(2) | a(6) b(3) | d(1) | d(2) |
| | | d(4) | | d(3) |

CONDITION OF SUPPLIES OR EQUIPMENT UPON RECEIPT b(4)

REC'D BY b(5)
Officer Unit

AT b(6)
c(1)

GPA Form 2

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

MONTHLY REPORT COMMODITIES OR SERVICES

RECEIVED, MONTH ENDING a(1)

TO: Office General Procurement Agent, AFPAC.

FROM: a(2)
COMMAND

| | SUPPLIES | SERVICES | EMERGENCY CASH PURCHASES |
|---|---|---|---|
| 1. Quartermaster | a(3) | a(5) | a(10) |
| 2. Corps of Engineers | a(3) | a(6) | a(10) |
| 3. Transportation | a(3) | a(7) | a(10) |
| 4. Signal Corps | a(3) | a(8) | a(10) |
| 5. Chemical Warfare Service | a(3) | a(5) | a(10) |
| 6. Ordnance | a(3) | a(5) | a(10) |
| 7. Special Services | a(3) | a(5) | a(10) |
| 8. Medical Corps | a(3) | a(5) | a(10) |
| TOTAL: | $ a(4) | $ a(9) | $ a(11) |

GPA Form 3

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HEADQUARTERS SIXTH ARMY
A.P.O. 442

# P A R T  II

## E Q U I V A L E N T S  O F  U N I T S

Metric - United States - Japanese

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HEADQUARTERS SIXTH ARMY
A.P.O. 442

# I N D E X


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## EQUIVALENTS OF UNITS

The Equivalents of Units Tables were calculated from the official Japanese definitions as indicated at the top of each table. In general the figures in the table are accurate to four significant figures.

The quantities on the same line are equivalents. The notation 0.(3)6214 indicates that the (3) is to be replaced by 3 ciphers.

A great deal of pressure was brought to bear by various professional and trade groups to adopt the metric system as the official Japanese measuring system. A section of the Office of Home Affairs started the work of conversion with completion scheduled for the year 1950. The work was interrupted by the war and as a result although in many instances metric units are used, Japanese units of measurement are still being used and are official.

## CONVERSION TABLES

The Conversion Tables provide a quick and easy method of converting certain common American units to Japanese units and vice versa. For example, to convert 39.37 feet to shaku, take two numbers from the table on page 2.2.4 and add them together, thus 39 feet = 39.2278 shaku and 0.37 feet = 0.3722 shaku; then 39.37 feet = 39.2278 + 0.3722 = 39.6 shaku.



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## EQUIVALENTS OF UNITS

### Length
(For all except textiles)

1 meter = 10 decimeters = 100 centimeters = 1000 millimeters = 0.1 dekameter = 0.01 hectometer = 0.001 kilometers = 0.0001 myriameter. By definition: 1 shaku = 10/33 meter.

| METERS | INCHES | FEET | YARDS | STATUTE MILES U.S. | BU | SUN | SHAKU | KEN | JŌ | CHŌ | RI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 39.37 | 3.2808 | 1.0936 | 0.(3)6214 | 330 | 33 | 3.3 | 0.5500 | 0.33 | 0.(2)9167 | 0.(3)2546 |
| 0.0254 | 1 | 0.08333 | 0.02778 | 0.(4)1578 | 8.3820 | 0.8382 | 0.08382 | 0.01397 | 0.(2)8382 | 0.(3)2328 | 0.(5)6468 |
| 0.3048 | 12 | 1 | 0.3333 | 0.(3)1894 | 100.5842 | 10.0584 | 1.0058 | 0.1676 | 0.1006 | 0.(2)2794 | 0.(4)7761 |
| 0.9144 | 36 | 3 | 1 | 0.(3)5682 | 301.7526 | 30.1753 | 3.0175 | 0.5029 | 0.3018 | 0.(2)8382 | 0.(3)2328 |
| 909.3172 | 63360 | 5280 | 1760 | 1 | ------- | 53108.458 | 5310.8458 | 885.1410 | 531.0846 | 14.7523 | 0.4098 |
| 0.(2)3030 | 0.1193 | 0.(2)9942 | 0.(2)3314 | 0.(5)1883 | 1 | 0.1 | 0.01 | 0.(2)1667 | 0.(2)1 | 0.(4)2778 | 0.(6)7716 |
| 0.03030 | 1.1930 | 0.09942 | 0.03314 | 0.(4)1883 | 10 | 1 | 0.1 | 0.01667 | 0.01 | 0.(3)2778 | 0.(5)7716 |
| 0.3030 | 11.9303 | 0.9942 | 0.3314 | 0.(3)1883 | 100 | 10 | 1 | 0.1667 | 0.1 | 0.(2)2778 | 0.(4)7716 |
| 1.8182 | 71.5818 | 5.9652 | 1.9884 | 0.(2)1130 | 600 | 60 | 6 | 1 | 0.6 | 0.01667 | 0.(3)4630 |
| 3.0303 | 119.3030 | 9.9419 | 3.3140 | 0.(2)1883 | 1000 | 100 | 10 | 1.6667 | 1 | 0.02778 | 0.(3)7716 |
| 109.0909 | 4294.9091 | 357.9091 | 119.3030 | 0.06779 | 36000 | 3600 | 360 | 60 | 36 | 1 | 0.02778 |
| 3927.2727 | 154617 | 12884.727 | 4294.9091 | 2.4403 | 1296000 | 129600 | 12960 | 2160 | 1296 | 36 | 1 |

The shaku of ordinary linear measure is called kane-jaku or kane-zashi.
The shaku of cloth linear measure is called kujira-jaku or kujira-zashi and is equal to 1.25 of the kane shaku.
The Japanese units ri, cho, ken, and shaku are used to express distance.
Additional decimal subdivisions of the shaku are: sun, bu, rin, mo, shi, etc.
Length is expressed orally as "6 shaku 5 sun 3 bu", but is written the same way or as "6.53 shaku".
A distance may be expressed only as 5 ri 25 cho.



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## EQUIVALENTS OF UNITS

### Area

1 hectare = 100 ares = 10000 centares or square meters.
By definition: 1 tsubo = 400/121 square meters.

| SQUARE METERS | SQUARE INCHES | SQUARE FEET | SQUARE YARDS | ACRES | SQUARE MILES | SHAKU | GŌ | TSUBO (BU) | SE | TAN | CHŌ (CHŌBU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1549.9969 | 10.7639 | 1.1960 | 0.(3)2471 | 0.(6)3861 | 30.25 | 3.025 | 0.3025 | 0.01008 | 0.(2)1008 | 0.(3)1008 |
| 0.(3)6452 | 1 | 0.(2)6944 | 0.(3)7716 | 0.(6)1594 | 0.(9)2491 | 0.01952 | 0.(2)1952 | 0.(3)1952 | 0.(5)6505 | 0.(6)6505 | 0.(7)6505 |
| 0.09290 | 144 | 1 | 0.1111 | 0.(4)2296 | 0.(7)3587 | 2.8103 | 0.2810 | 0.02810 | 0.(3)9368 | 0.(4)9368 | 0.(5)9368 |
| 0.8361 | 1296 | 9 | 1 | 0.(3)2066 | 0.(6)3228 | 25.2930 | 2.5293 | 0.2529 | 0.(2)8431 | 0.(3)8431 | 0.(4)8431 |
| 4046.8726 | 6272640 | 43560 | 4840 | 1 | 0.(2)1563 | 122417.90 | 12241.790 | 1224.1790 | 40.8060 | 4.0806 | 0.4081 |
| 2589998 | ------- | 27878400 | 3097600 | 640 | 1 | 78347200 | 7834720 | 783474.54 | 26115.818 | 2611.5819 | 261.1582 |
| 0.03306 | 51.2396 | 0.3558 | 0.03954 | 0.(5)8169 | 0.(7)1276 | 1 | 0.1 | 0.01 | 0.(3)3333 | 0.(4)3333 | 0.(5)3333 |
| 0.3306 | 512.3957 | 3.5583 | 0.3954 | 0.(4)8169 | 0.(6)1276 | 10 | 1 | 0.1 | 0.(2)3333 | 0.(3)3333 | 0.(4)3333 |
| 3.3058 | 5123.9567 | 35.5830 | 3.9537 | 0.(3)8169 | 0.(5)1276 | 100 | 10 | 1 | 0.03333 | 0.(2)3333 | 0.(3)3333 |
| 99.1736 | ----- | 1067.4910 | 118.6101 | 0.02451 | 0.(4)3829 | 3000 | 300 | 30 | 1 | 0.1 | 0.01 |
| 991.7355 | ----- | 10674.910 | 1186.1011 | 0.2451 | 0.(3)3829 | 30000 | 3000 | 300 | 10 | 1 | 0.1 |
| 9917.3554 | ----- | 106749.10 | 11861.011 | 2.4506 | 0.(2)3829 | 300000 | 30000 | 3000 | 100 | 10 | 1 |

The units, tsubo, tan (also bu), and chōbu are used respectively in expressing land areas of town lots, agricultural lands, and hilly or mountainous road.
Note that the square chō is not equal to a square each side of which is 1 chō (60 ken) which would be 3600 square ken, but is equal to a rectangle of 60 ken by 50 ken which is 3000 square ken.
The ko (used in Formosa) equals 2934 tsubo.

## EQUIVALENTS OF UNITS

### Capacity

1 liter = 10 deciliters = 100 centileters = 1000 milliliters = 0.1 dekaliter = 0.01 hectoliters = 0.001 kiloliters = 0.001 cubic meters or steres.
By definition: 1 shō = 2401/1331 liters.

| LITERS | CUBIC CM | CUBIC INCHES | FLUID OUNCES | PINTS | LIQUID QUARTS | U.S. GALLONS | SHAKU | GŌ | SHŌ | TO |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1000 | 61.023 | 33.8138 | 2.1134 | 1.0567 | 0.2642 | 55.4352 | 5.5435 | 0.5544 | 0.05544 |
| 0.(2)1 | 1 | 0.06102 | 0.03381 | 0.(2)2113 | 0.(2)1057 | 0.(3)2642 | 0.05544 | 0.(2)5544 | 0.(3)5544 | 0.(4)5544 |
| 0.01639 | 16.3872 | 1 | 0.5541 | 0.03463 | 0.01732 | 0.(2)4329 | 0.9084 | 0.09084 | 0.(2)9084 | 0.(3)9084 |
| 0.02957 | 29.5737 | 1.8047 | 1 | 0.0325 | 0.03125 | 0.(2)7813 | 1.6394 | 0.1639 | 0.01639 | 0.(2)1639 |
| 0.4732 | 473.1793 | 28.875 | 16 | 1 | 0.5 | 0.125 | 26.2308 | 2.6231 | 0.2623 | 0.02623 |
| 0.9464 | 946.3586 | 57.75 | 32 | 2 | 1 | 0.25 | 52.4616 | 5.2462 | 0.5246 | 0.05246 |
| 3.7854 | 3785.4345 | 231 | 128 | 8 | 4 | 1 | 209.8465 | 20.9846 | 2.09846 | 0.2098 |
| 0.01804 | 18.0391 | 1.1008 | 0.6100 | 0.03812 | 0.01906 | 0.(2)4765 | 1 | 0.1 | 0.01 | 0.(2)1 |
| 0.1804 | 180.3907 | 11.0080 | 6.0997 | 0.3812 | 0.1906 | 0.04765 | 10 | 1 | 0.1 | 0.01 |
| 1.8039 | 1803.9068 | 110.0805 | 60.9970 | 3.8123 | 1.9062 | 0.4765 | 100 | 10 | 1 | 0.1 |
| 18.0391 | 18039.068 | 1100.8049 | 609.9698 | 38.1231 | 19.0616 | 4.7654 | 1000 | 100 | 10 | 1 |

Japanese units for capacity and volume are identical in name and quantity. They are shown in separate tables for convenience in use.



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## EQUIVALENTS OF UNITS

### Volume

1 cubic centimeter = 0.001 cubic decimeters = 0.000001 cubic meters = 0.001 liter.

By definition: 1 koku = 2401 x $10^5$/1331 cubic centimeters.

| CUBIC CENTIMETERS | CUBIC INCHES | CUBIC FEET | CUBIC YARDS | U.S. BUSHELS | SHAKU | GŌ | SHŌ | TO | HYO | KOKU (GOKU) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.06102 | 0.(4)3531 | 0.(5)1308 | 0.(4)2838 | 0.05544 | 0.(2)5544 | 0.(3)5544 | 0.(4)5544 | 0.(4)1386 | 0.(5)5544 |
| 16.3872 | 1 | 0.(3)5787 | 0.(4)2143 | 0.(3)4650 | 0.9084 | 0.09084 | 0.(2)9084 | 0.(3)9084 | 0.(3)2271 | 0.(4)9084 |
| 28317.0 | 1728 | 1 | 0.03704 | 0.8036 | 1569.760 | 156.9760 | 15.6976 | 1.5698 | 0.3924 | 0.1570 |
| 764558.4 | 46656 | 27 | 1 | 21.6962 | 42383.533 | 4238.3533 | 423.8353 | 42.3835 | 10.5957 | 4.2384 |
| 35239.282 | 2150.42 | 1.2445 | 0.04609 | 1 | 1953.4979 | 195.3498 | 19.5350 | 1.9535 | 0.4884 | 0.1954 |
| 18.0391 | 1.1006 | 0.(3)6370 | 0.(4)2359 | 0.(3)5119 | 1 | 0.1 | 0.01 | 0.(2)1 | 0.(3)25 | 0.(3)1 |
| 180.3907 | 11.0080 | 0.(2)6370 | 0.(3)2359 | 0.(2)5119 | 10 | 1 | 0.1 | 0.01 | 0.(2)25 | 0.(2)1 |
| 1803.9068 | 110.0805 | 0.06370 | 0.(2)2359 | 0.05119 | 100 | 10 | 1 | 0.1 | 0.025 | 0.01 |
| 18039.068 | 1100.8049 | 0.6370 | 0.02359 | 0.5119 | 1000 | 100 | 10 | 1 | 0.25 | 0.1 |
| 72156.273 | 4403.2196 | 2.5482 | 0.09438 | 2.0476 | 4000 | 400 | 40 | 4 | 1 | 0.4 |
| 180390.68 | 11008.049 | 6.3704 | 0.2359 | 5.1189 | 10000 | 1000 | 100 | 10 | 2.5 | 1 |

Japanese units for capacity and volume are identical in name and quantity. They are shown in separate tables for convenience in use.

1 shō = 64.827 rippō (cubic) sun = a cube, 4.017 sun long x 4.017 sun wide x 4.017 sun high.



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## EQUIVALENTS OF UNITS

### Weight

1 kilogram = 1000 grams = 0.001 metric ton. 1 gram = 10 decigrams = 100 centigrams = 1000 milligrams = 0.1 dekagram = 0.01 hectogram = 0.001 kilogram = 0.0001 myriagram.
By definition: 1 kan = 3750 grams.

| GRAMS | GRAINS | OUNCES AVOIR | POUNDS AVOIR | SHORT TONS | MO | RIN | FUN | HOLE | KIN | K.N (KWAN) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15.432 | 0.03527 | 0.(2)2205 | 0.(5)1102 | 266.6667 | 26.6667 | 2.6667 | 0.2667 | 0.(2)1667 | 0.(3)2667 |
| 0.06480 | 1 | 0.(2)2286 | 0.(3)1429 | 0.(6)7143 | 17.2797 | 1.7280 | 0.1728 | 0.01728 | 0.(3)1080 | 0.(4)1728 |
| 28.3495 | 437.5 | 1 | 0.0625 | 0.(4)3215 | 7559.8738 | 755.9874 | 75.5907 | 7.5599 | 0.04725 | 0.(2)7560 |
| 453.5924 | 7000 | 16 | 1 | 0.(3)5 | ------- | ------- | 1209.5798 | 120.9580 | 0.7560 | 0.1210 |
| 907185 | ------- | 32000 | 2000 | 1 | ------- | ------- | ------- | 241916 | 1511.9748 | 241.9160 |
| 0.(2)375 | 0.05787 | 0.(3)1323 | 0.(5)8267 | ------- | 1 | 0.1 | 0.01 | 0.(2)1 | 0.(5)625 | 0.(5)1 |
| 0.0375 | 0.5787 | 0.(2)1323 | 0.(4)8267 | ------- | 10 | 1 | 0.1 | 0.01 | 0.(4)625 | 0.(4)1 |
| 0.375 | 5.787 | 0.01323 | 0.(3)8267 | 0.(6)4134 | 100 | 10 | 1 | 0.1 | 0.(3)625 | 0.(3)1 |
| 3.75 | 57.8713 | 0.1323 | 0.(2)8267 | 0.(5)4134 | 1000 | 100 | 10 | 1 | 0.(2)625 | 0.(2)1 |
| 600 | 9259.4 | 21.1644 | 1.3228 | 0.(3)6614 | 160000 | 16000 | 1600 | 160 | 1 | 0.16 |
| 3750 | 57871 | 132.2773 | 8.2673 | 0.(2)4134 | 1000000 | 100000 | 10000 | 1000 | 6.25 | 1 |



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## EQUIVALENTS OF UNITS
## SHAKU

The Japanese word, shaku, is used to denote a fixed unit of measurement. The same word, expressed in Japanese writing by the same or a different character, is used to denote other fixed units of measurements. The determination as to which unit of measurement is meant can only be made by context of the subject.

In the table below the words, linear shaku, are used to indicate the Japanese basic unit of linear measurement, i.e., 0.9942 feet. This is done for explanation purposes only and is never translated as such into Japanese.

1 shaku (linear-ordinary measure) - - - - - - - - - - - - - - - - - - - - - - - - - - - - = 0.9942 feet.

1 shaku (linear-cloth measure only) = 1.25 x linear shaku- - - - - - - - - - - - - - - = 1.24274 feet.

1 shaku (area measure) = a square, 0.6 linear shaku long by 0.6 linear shaku wide which is equal to 0.36 heihō (square) shaku - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - = 0.3558 sq. ft.

1 heihō shaku (square shaku) = a square, 1 linear shaku long by 1 linear shaku wide - - - - - - - - - - - - - - - - - - - - - - - - - - - = 0.9884 sq. ft.

1 shaku (volume measure) = a cube, 0.086547 linear shaku long by 0.086547 linear shaku wide by 0.086547 linear shaku high which is equal to 0.(3)64827 rippō (cubic) shaku - - - = 0.(3)6370 cu. ft.

1 rippō shaku (cubic shaku) = a cube, 1 linear shaku long by 1 linear shaku wide by 1 linear shaku high- - - - - - - - - - - - = 0.9827 cu. ft.

Similarly other Japanese fixed units of measurement, such as the sun, bu, rin, mo, shi, tan, tsubo (bu), koku, kan (kwan), etc., have other fixed values when used in different measurement tables (see page 2.1.8).

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## EQUIVALENTS OF UNITS
## MISCELLANEOUS

1. Decimal systems:

| Metric Name | American Name | Written figure | Short Figure | Japanese Name |
|---|---|---|---|---|
| | Trillions | 1,000,000,000,000 | $10^{12}$ | cho |
| | Hundred billions | 100,000,000,000 | $10^{11}$ | sen-oku |
| | Ten billions | 10,000,000,000 | $10^{10}$ | hyaku-oku |
| | Billions | 1,000,000,000 | $10^{9}$ | ju-oku |
| | Hundred millions | 100,000,000 | $10^{8}$ | oku |
| | Ten millions | 10,000,000 | $10^{7}$ | sen-man |
| mega- | Millions | 1,000,000 | $10^{6}$ | hyaku-man |
| | Hundred thousands | 100,000 | $10^{5}$ | ju-man |
| myria- | Ten thousands | 10,000 | $10^{4}$ | man |
| kilo- | Thousands | 1,000 | $10^{3}$ | sen |
| hecto- | Hundreds | 100 | $10^{2}$ | hyaku |
| deka- | Tens | 10 | 10 | ju |
| | Units | 1 | 1 | ichi |
| deci- | Tenths | 0.1 | 0.1 | bu (wari) |
| centi- | Hundredths | 0.01 | 0.01 | rin (bu) |
| milli- | thousandths (mills) | 0.001 | 0.(2)1 | mo (rin) |
| | Ten thousandths | 0.0001 | 0.(3)1 | shi |
| | Hundred thousandths | 0.00001 | 0.(4)1 | kotsu |
| micro- | Millionths | 0.000001 | 0.(5)1 | bi |
| | Ten millionths | 0.0000001 | 0.(6)1 | sen |
| | Hundred millionths | 0.00000001 | 0.(7)1 | sha |
| | Billionths | 0.000000001 | 0.(8)1 | jin |
| | Ten billionths | 0.0000000001 | 0.(9)1 | ai |
| | Hundred billionths | 0.00000000001 | 0.(10)1 | byo |
| | Trillionths | 0.000000000001 | 0.(11)1 | baku |

Japanese decimal places above cho are juccho, hyaku-cho, sen-cho, kyo, jukkyo, hyakkyo, and sen-kyo.

The words, wari, bu, and rin are alternate words for bu, rin, and mo and are used by banks in expressing percentage.

## EQUIVALENTS OF UNITS

## MISCELLANEOUS

2. Japanese room sizes. The size of Japanese type rooms is often expressed by the number of mats (tatami or jō) that make up the floor. The size of mats are standardized but vary for different sections of Japan as follows:

| Name of Room | District Used | Mat Size |
|---|---|---|
| Kyōma (kyoto room) or Homma (true room) | West of Kansai | 6.3 x 3.15 shaku. |
| Otsuma (otsu room) | Part of Otsu shi | 6.1 x 3.05 shaku. |
| Edoma (tokyo room) | North of Kanto | 5.8 x 2.9 shaku. |
| Inakama (rural room) | Between Nagoya and Takayama | 6.0 x 3.0 shaku |

The most frequent arrangements of mats involve the use of 2, 3, 4-1/2, 6, 8, 10, 12, and 15 mats. An 8 mat room would be called hachijōma.

3. Building measurements. Length, width, and height of buildings are expressed in terms of ken and shaku. Area of buildings and building plots are expressed in tsubo. These units vary for different localities.

4. Body measurements. Height of a person is expressed in shaku, sun, and bu. Weight is in kan and monme.

5. Cloth measurements. Cloth quantities are generally expressed in width and length of rolls of cloth and not in area. Usual widths, lengths, and roll sizes are:

| Width | | Length | |
|---|---|---|---|
| koha ba = 1 shaku = 15" (approx.) | | 2 jō 8 shaku = 28 shaku = 9-1/4 yards (approx.) | |
| ohaba = 2 shaku = 30" " | | 5 jō 6 shaku = 56 shaku = 18-1/2 yards (approx.) | |
| mihaba = 3 shaku = 45" " | | | |
| yohabā = 4 shaku = 60" " | | | |

### Rolls of Cloth

1 tan = 1 shaku x 2 jō 8 shaku = 15 inches x 9-1/4 yards (approx.).
1 hiki = 2 tan = 1 shaku x 5 jō 6 shaku = 15 inches x 18-1/2 yards (approx.).
ohaba 1 tan = 2 shaku x 2 jō 8 shaku = 30 inches x 9-1/4 yards (approx.).



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## EQUIVALENTS OF UNITS
## MISCELLANEOUS

### White Silk Only

Width: kohaba = 1 shaku = 15 inches (approx.).
Length: 3 jō, 6 jō, and 8 jō = 10 yards, 20 yards, and 26½ yards respectively (approx.).
Rolls: san-jō-mono = 1 shaku x 3 jō = 15 inches x 10 yards (approx.).
roku-jō-mono = 1 shaku x 6 jō = 15 inches x 20 yards (approx.).
hachi-jō-mono = 1 shaku x 8 jō = 15 inches x 26-1/2 yards (approx.).

Roll of Cloth (Used by Shinto and Buddhist Priests)

1 pon (or hon) = 1-1/2 to 2-1/4 kane shaku wide x 15 to 16 kane shaku long (about 18 to 27 inches wide by 15 to 16 feet long).

6. Yarn measurements.

### Cotton or staple fiber yarn

1 kase (hank) = 1-1/2 x 560 yards = 840 square yards.
1 kōri (bale) = 2 hyo = 40 tama (bundle) = 200 to 400 kase (varies with fineness) = 400 pounds.

### Rayon yarn

1 kase (hank) = 1 x 2400 meters = 2400 square meters.
1 kōri (bale) = 10 katsu (bundle) = 1400 to 1500 kase (varies with fineness) = 100 pounds.

### Raw silk yarn

1 kase (hank) = 9 to 10 momme = about 1.2 ounces.
1 kōri (bale) = 16 katsu (bundle) = 480 nejiri (or neji) = 960 kase (hank) = about 9000 momme = about 74 pounds.
For export: 1 hyo = 28 to 32 katsu = about 132 pounds.



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# EQUIVALENTS OF UNITS
## MISCELLANEOUS

7. Foodstuffs.

| Item | Unit of Measure (and U.S. approx. equivalent) | Quantity Measure |
|---|---|---|
| Grain, (rice, barley, millet, wheat, oats, peas, beans, barnyard grass, etc.). | koku (5 bushels), to (1/2 bushel) sho (1-1/2 dry qts), go (1/6 dry qt) | Bag = 1 hyo = 4 to = 2 bushels |
| Chestnuts | sho (1-1/2 dry qts). | Bag = 1 hyo = 4 to = 2 bushels |
| Drink (whiskey, sake, also soy sauce). | to (4-3/4 gals), sho (2 liquid qts) go (6 fluid oz), litre (1 liquid qt) | Bottle = 1 sho = 2 qts. Case = 18 bottles. Barrel = 2 to = 9-1/2 gals. Barrel = 4 to = 19 gals. |
| American flour | ton, kilogram | Bag = 22 kg = 48-1/2 lbs. |
| Japanese flour | kan (8-1/2 lbs, momme (1/8oz.). | |
| Vegetables | kan, momme | |
| Fruit | kan, momme | Box |
| Meat | kan, momme | |
| Fish | kan, momme | |
| Salt | kan, momme | |
| Bean paste | kan, momme | Barrel = 10 or 20 kan = 83 or 165 lbs. |
| White sugar | kin (1-1/3 lbs), momme (1/8 oz) | Bag = 100 kin = 132 lbs. |
| Unrefined and black sugar | kin, momme | Bag = 150 kin = 198 lbs. |
| Cake | kin, momme | |
| Tea | kin, momme | |

8. Timber and Wood.

1 shakujime = 12 rippo (cubic) shaku = 11.79 cubic feet (solid volume).
1 tana (fagots, etc.) = 10 koku = 100 rippo (cubic) shaku = 98.27 cubic feet (solid volume).
American foot board measure = 1 board foot = 1/12 or 0.083 cubic feet (solid volume)
American cord of firewood = 1 cord = 128 cubic feet (space volume).

9. Leather. 1 tsubo = 1 heine (square) shaku = 0.988 square foot

10. Socks (tabi). 1 mor (sewed distance from heel to tip of toes) = 10 bu (kujira shaku) = 8 bu (kane shaku) = 0.95 inches.

11. Marine Speed. 1 mi (marine) = 1 knot = 1 nautical mile (6080.2 ft) per hour = 1.853245 kilometers per hour.

12. Charcoal. 1 hyo (bag) = 4 kan (about 33 lbs) or 6 kan (about 49-1/2 lbs).

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## CONVERSION TABLE
### Japanese to Western Calendar

Beginning with the restoration in 1868, when Emperor Meiji ascended the throne, the Japanese people counted years by reference to the year the emperor had ascended the throne. With the end of each Emperor's reign, a new period starts and after his demise he is referred to by the name of the period during which he reigned.

| JAPANESE YEAR | WESTERN YEAR | JAPAN YEAR | WESTERN YEAR | JAPAN YEAR | WESTERN YEAR | JAPAN YEAR | WESTERN YEAR | JAPAN YEAR | WESTERN YEAR | JAPAN YEAR | WESTERN YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Archaic a Period | 660 BC to 552 AD | MEIJI PERIOD (Enlightened Era) | | 17 | 1884 | 35 | 1902 | 6 | 1917 | 7 | 1932 |
| | | | | 18 | 1885 | 36 | 1903 | 7 | 1918 | 8 | 1933 |
| Asuka Period | 552 to 645 | 1 | 1868 | 19 | 1886 | 37 | 1904 | 8 | 1919 | 9 | 1934 |
| | | 2 | 1869 | 20 | 1887 | 38 | 1905 | 9 | 1920 | 10 | 1935 |
| Nara Period | 646 to 793 | 3 | 1870 | 21 | 1888 | 39 | 1906 | 10 | 1921 | 11 | 1936 |
| | | 4 | 1871 | 22 | 1889 | 40 | 1907 | 11 | 1922 | 12 | 1937 |
| Earlier Heian Period | 794 to 893 | 5 | 1872 | 23 | 1890 | 41 | 1908 | 12 | 1923 | 13 | 1938 |
| | | 6 | 1873 | 24 | 1891 | 42 | 1909 | 13 | 1924 | 14 | 1939 |
| Later Heian Period | 894 to 1185 | 7 | 1874 | 25 | 1892 | 43 | 1910 | 14 | 1925 | 15 | 1940 |
| | | 8 | 1875 | 26 | 1893 | 44 | 1911 | b 15 | 1926 | 16 | 1941 |
| Kamakura Period | 1186 to 1333 | 9 | 1876 | 27 | 1894 | 45 | 1912 | SHOWA PERIOD (Radiant Peace) | | 17 | 1942 |
| | | 10 | 1877 | 28 | 1895 | TAISHO PERIOD (Way of Heaven) | | | | 18 | 1943 |
| Muromachi Period | 1334 to 1573 | 11 | 1878 | 29 | 1896 | | | 1 | 1926 | 19 | 1944 |
| | | 12 | 1879 | 30 | 1897 | 1 | 1912 | 2 | 1927 | c 20 | 1945 |
| Momoyama Period | 1574 to 1614 | 13 | 1880 | 31 | 1898 | 2 | 1913 | 3 | 1928 | 21 | 1946 |
| | | 14 | 1881 | 32 | 1899 | 3 | 1914 | 4 | 1929 | 22 | 1947 |
| Edo Period | 1615 to 1866 | 15 | 1882 | 33 | 1900 | 4 | 1915 | 5 | 1930 | 23 | 1948 |
| | | 16 | 1883 | 34 | 1901 | 5 | 1916 | 6 | 1931 | 24 | 1949 |

a - This period starts with Japan's first Emperor, Jimmu Tenno.

b - The Emperor Taisho died on December 25, 1926 at 1:25 A.M. The new era, the Showa Era, began at exactly that day and time.

c - 2605 years from the ascension to the throne by Jimmu Tenno.
Example of Japanese date:
August 14, 1945 in the Japanese calendar would be expressed as Showa niju-nen (20th year), hachi-gatsu (8th month or August), juyokka (14th day).

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# CONVERSION TABLE

## Dollars to Yen

## Cents to Sen

By GHQ AFPAC directive: 1 dollar = 15 yen.

| DOLLARS & CENTS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 15.00 | 30.00 | 45.00 | 60.00 | 75.00 | 90.00 | 105.00 | 120.00 | 135.00 |
| 10 | 150.00 | 165.00 | 180.00 | 195.00 | 210.00 | 225.00 | 240.00 | 255.00 | 270.00 | 285.00 |
| 20 | 300.00 | 315.00 | 330.00 | 345.00 | 360.00 | 375.00 | 390.00 | 405.00 | 420.00 | 435.00 |
| 30 | 450.00 | 465.00 | 480.00 | 495.00 | 510.00 | 525.00 | 540.00 | 555.00 | 570.00 | 585.00 |
| 40 | 600.00 | 615.00 | 630.00 | 645.00 | 660.00 | 675.00 | 690.00 | 705.00 | 720.00 | 735.00 |
| 50 | 750.00 | 765.00 | 780.00 | 795.00 | 810.00 | 825.00 | 840.00 | 855.00 | 870.00 | 885.00 |
| 60 | 900.00 | 915.00 | 930.00 | 945.00 | 960.00 | 975.00 | 990.00 | 1005.00 | 1020.00 | 1035.00 |
| 70 | 1050.00 | 1065.00 | 1080.00 | 1095.00 | 1110.00 | 1125.00 | 1140.00 | 1155.00 | 1170.00 | 1185.00 |
| 80 | 1200.00 | 1215.00 | 1230.00 | 1245.00 | 1260.00 | 1275.00 | 1290.00 | 1305.00 | 1320.00 | 1335.00 |
| 90 | 1350.00 | 1365.00 | 1380.00 | 1395.00 | 1410.00 | 1425.00 | 1440.00 | 1455.00 | 1470.00 | 1485.00 |

To convert cents to sen move the decimal point two places to the left in top line and left column. The resultant figure from the table should have the decimal point moved two places to the left also.

Similarly for dollar values over $99.00 the decimal point should be moved to the right.

EXAMPLE: To convert $33.08 to Japanese value, take two numbers from the table, move the decimal point for the cents figure, and add them together, thus 33 dollars = 495 yen, and 0.08 dollars (8 cents) = 1.20 yen (120 sen); then $33.08 = 495 + 1.20 = ¥496.20, or 496 yen 20 sen.

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## CONVERSION TABLE
## Yen to Dollars
## Sen to Cents

By GHQ AFPAC directive: 1 yen = 1/15 or 0.0666667 dollar.

| YEN & SEN | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.0667 | 0.1333 | 0.2000 | 0.2667 | 0.3333 | 0.4000 | 0.4667 | 0.5333 | 0.6000 |
| 10 | 0.6667 | 0.7333 | 0.8000 | 0.8667 | 0.9333 | 1.0000 | 1.0667 | 1.1333 | 1.2000 | 1.2667 |
| 20 | 1.3333 | 1.4000 | 1.4667 | 1.5333 | 1.6000 | 1.6667 | 1.7333 | 1.8000 | 1.8667 | 1.9333 |
| 30 | 2.0000 | 2.0667 | 2.1333 | 2.2000 | 2.2667 | 2.3333 | 2.4000 | 2.4667 | 2.5333 | 2.6000 |
| 40 | 2.6667 | 2.7333 | 2.8000 | 2.8667 | 2.9333 | 3.0000 | 3.0667 | 3.1333 | 3.2000 | 3.2667 |
| 50 | 3.3333 | 3.4000 | 3.4667 | 3.5333 | 3.6000 | 3.6667 | 3.7333 | 3.8000 | 3.8667 | 3.9333 |
| 60 | 4.0000 | 4.0667 | 4.1333 | 4.2000 | 4.2667 | 4.3333 | 4.4000 | 4.4667 | 4.5333 | 4.6000 |
| 70 | 4.6667 | 4.7333 | 4.8000 | 4.8667 | 4.9333 | 5.0000 | 5.0667 | 5.1333 | 5.2000 | 5.2667 |
| 80 | 5.3333 | 5.4000 | 5.4667 | 5.5333 | 5.6000 | 5.6667 | 5.7333 | 5.8000 | 5.8667 | 5.9333 |
| 90 | 6.0000 | 6.0667 | 6.1333 | 6.2000 | 6.2667 | 6.3333 | 6.4000 | 6.4667 | 6.5333 | 6.6000 |

To convert sen to cents move the decimal point two places to the left in top line and left column. The resultant figure from the table should have the decimal point moved two places to the left also.

## CONVERSION TABLE
### Feet to Shaku

By definition: 1 foot = 3960/3937 or 1.(2)584201 shaku.

| FEET | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 1.0058 | 2.0117 | 3.0175 | 4.0234 | 5.0292 | 6.0351 | 7.0409 | 8.0467 | 9.0526 |
| 10 | 10.0584 | 11.0643 | 12.0701 | 13.0759 | 14.0818 | 15.0876 | 16.0935 | 17.0993 | 18.1052 | 19.1110 |
| 20 | 20.1168 | 21.1227 | 22.1285 | 23.1344 | 24.1402 | 25.1460 | 26.1519 | 27.1577 | 28.1636 | 29.1694 |
| 30 | 30.1753 | 31.1811 | 32.1869 | 33.1928 | 34.1986 | 35.2745 | 36.2103 | 37.2162 | 38.2220 | 39.2278 |
| 40 | 40.2337 | 41.2395 | 42.2454 | 43.2512 | 44.2570 | 45.2629 | 46.2687 | 47.2746 | 48.2804 | 49.2863 |
| 50 | 50.2921 | 51.2979 | 52.3038 | 53.3096 | 54.3155 | 55.3213 | 56.3272 | 57.3330 | 58.3388 | 59.3447 |
| 60 | 60.3505 | 61.3564 | 62.3622 | 63.3680 | 64.3739 | 65.3797 | 66.3856 | 67.3914 | 68.3973 | 69.4031 |
| 70 | 70.4089 | 71.4148 | 72.4206 | 73.4265 | 74.4323 | 75.4382 | 76.4440 | 77.4498 | 78.4557 | 79.4615 |
| 80 | 80.4674 | 81.4732 | 82.4790 | 83.4849 | 84.4907 | 85.4966 | 86.5024 | 87.5083 | 88.5141 | 89.5199 |
| 90 | 90.5258 | 91.5316 | 92.5375 | 93.5433 | 94.5491 | 95.5550 | 96.5608 | 97.5667 | 98.5725 | 99.5784 |

To convert from feet to other Japanese units move the decimal point in the table as follows:
sun, bu, and rin - 1, 2, and 3 places to the right. jō - 1 place to the left.

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## CONVERSION TABLE
### Shaku to Feet

By definition: 1 shaku = 3937/3960 or 0.994192 feet.

| SHAKU | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.9942 | 1.9884 | 2.9826 | 3.9768 | 4.9710 | 5.9652 | 6.9593 | 7.9535 | 8.9477 |
| 10 | 9.9419 | 10.9361 | 11.9303 | 12.9245 | 13.9187 | 14.9129 | 15.9071 | 16.9013 | 17.8955 | 18.8896 |
| 20 | 19.8838 | 20.8780 | 21.8722 | 22.8664 | 23.8606 | 24.8548 | 25.8490 | 26.8432 | 27.8374 | 28.8316 |
| 30 | 29.8258 | 30.8120 | 31.8141 | 32.8083 | 33.8025 | 34.7967 | 35.7909 | 36.7851 | 37.7793 | 38.7735 |
| 10 | 39.7677 | 40.7619 | 41.7561 | 42.7503 | 43.7444 | 44.7386 | 45.7328 | 46.7270 | 47.7212 | 48.7154 |
| 50 | 49.7096 | 50.7038 | 51.6980 | 52.6922 | 53.6864 | 54.6806 | 55.6748 | 56.6689 | 57.6631 | 58.6573 |
| 60 | 59.6515 | 60.6457 | 61.6399 | 62.6341 | 63.6283 | 64.6225 | 65.6167 | 66.6109 | 67.6051 | 68.5992 |
| 70 | 69.5934 | 70.5876 | 71.5818 | 72.5760 | 73.5702 | 74.5644 | 75.5586 | 76.5528 | 77.5470 | 78.5412 |
| 80 | 79.5354 | 80.5296 | 81.5237 | 82.5179 | 83.5121 | 84.5063 | 85.5005 | 86.4947 | 87.4889 | 88.4831 |
| 90 | 89.4773 | 90.4715 | 91.4656 | 92.4599 | 93.4540 | 94.4482 | 95.4424 | 96.4366 | 97.4308 | 98.4250 |

To convert from other Japanese units to feet move the decimal point in the table as follows:
jō - 1 place to the right.
sun, bu, and rin - 1, 2, and 3 places to the left.

## CONVERSION TABLE

### Feet to Kon

By definition: 1 foot = 3960/23622 or 0.167640 kon.

| FEET | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.1676 | 0.3353 | 0.5029 | 0.6706 | 0.8382 | 1.0058 | 1.1735 | 1.3411 | 1.5088 |
| 10 | 1.6764 | 1.8440 | 2.0117 | 2.1793 | 2.3470 | 2.5146 | 2.6822 | 2.8499 | 3.0175 | 3.1852 |
| 20 | 3.3528 | 3.5204 | 3.6881 | 3.8557 | 4.0234 | 4.1910 | 4.3586 | 4.5263 | 4.6939 | 4.8616 |
| 30 | 5.0292 | 5.1968 | 5.3645 | 5.5321 | 5.6998 | 5.8674 | 6.0350 | 6.2027 | 6.3703 | 6.5380 |
| 40 | 6.7056 | 6.8732 | 7.0409 | 7.2085 | 7.3762 | 7.5438 | 7.7114 | 7.8791 | 8.0467 | 8.2144 |
| 50 | 8.3820 | 8.5496 | 8.7173 | 8.8849 | 9.0526 | 9.2202 | 9.3878 | 9.5555 | 9.7231 | 9.8908 |
| 60 | 10.0584 | 10.2260 | 10.3937 | 10.5613 | 10.7290 | 10.8966 | 11.0642 | 11.2319 | 11.3995 | 11.3672 |
| 70 | 11.7348 | 11.9024 | 12.0701 | 12.2377 | 12.4054 | 12.5730 | 12.7406 | 12.9083 | 13.0759 | 13.2436 |
| 80 | 13.4112 | 13.5788 | 13.7465 | 13.9141 | 14.0818 | 14.2494 | 14.4170 | 14.5847 | 14.7523 | 14.9200 |
| 90 | 15.0876 | 15.2552 | 15.4229 | 15.5905 | 15.7582 | 15.9258 | 16.0934 | 16.2611 | 16.4287 | 16.5964 |



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## CONVERSION TABLE

### Ken to Feet

By definition: 1 ken = 23622/3960 or 5.965152 feet.

| KEN | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 5.965 | 11.930 | 17.896 | 23.861 | 29.826 | 35.791 | 41.756 | 47.721 | 53.686 |
| 10 | 59.652 | 65.617 | 71.582 | 77.547 | 83.512 | 89.477 | 95.442 | 101.408 | 107.373 | 113.338 |
| 20 | 119.303 | 125.268 | 131.233 | 137.198 | 143.164 | 149.129 | 155.094 | 161.059 | 167.024 | 172.989 |
| 30 | 178.955 | 184.920 | 190.885 | 196.850 | 202.815 | 208.780 | 214.745 | 220.711 | 226.676 | 232.641 |
| 40 | 238.606 | 244.571 | 250.536 | 256.502 | 262.467 | 268.432 | 274.397 | 280.362 | 286.327 | 292.292 |
| 50 | 298.258 | 304.223 | 310.188 | 316.153 | 322.118 | 328.083 | 334.049 | 340.014 | 345.979 | 351.944 |
| 60 | 357.909 | 363.874 | 369.839 | 375.805 | 381.770 | 387.735 | 393.700 | 399.665 | 405.630 | 411.595 |
| 70 | 417.561 | 423.526 | 429.491 | 435.456 | 441.421 | 447.386 | 453.352 | 459.317 | 465.282 | 471.247 |
| 80 | 477.212 | 483.177 | 489.142 | 495.108 | 501.073 | 507.038 | 513.003 | 518.968 | 524.933 | 530.899 |
| 90 | 536.864 | 542.829 | 548.794 | 554.760 | 560.725 | 566.690 | 572.655 | 578.620 | 584.585 | 590.550 |



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## CONVERSION TABLE

### Miles to Ri

Definition: 1 mile = 2090880/5102352 or 0.409787 ri.

| MILES | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.4098 | 0.8196 | 1.2294 | 1.6391 | 2.0489 | 2.4587 | 2.8685 | 3.2783 | 3.6881 |
| 10 | 4.0979 | 4.5077 | 4.9174 | 5.3272 | 5.7370 | 6.1468 | 6.5566 | 6.9674 | 7.3762 | 7.7860 |
| 20 | 8.1957 | 8.6055 | 9.0153 | 9.4251 | 9.8349 | 10.2447 | 10.6545 | 11.0642 | 11.4740 | 11.8838 |
| 30 | 12.2936 | 12.7034 | 13.1132 | 13.5230 | 13.9328 | 14.3425 | 14.7523 | 15.1621 | 15.5719 | 15.9817 |
| 40 | 16.3915 | 16.8013 | 17.2111 | 17.6208 | 18.0306 | 18.4404 | 18.8502 | 19.2600 | 19.6698 | 20.0796 |
| 50 | 20.4894 | 20.8991 | 21.3089 | 21.7187 | 22.1285 | 22.5383 | 22.9481 | 23.3578 | 23.7676 | 24.1774 |
| 60 | 24.5872 | 24.9970 | 25.4068 | 25.8166 | 26.2264 | 26.6362 | 27.0459 | 27.4557 | 27.8655 | 28.2753 |
| 70 | 28.6851 | 29.0949 | 29.5047 | 29.9145 | 30.3242 | 30.7340 | 31.1438 | 31.5536 | 31.9634 | 32.3732 |
| 80 | 32.7830 | 33.1927 | 33.6025 | 34.0123 | 34.4221 | 34.8319 | 35.2417 | 35.6515 | 36.0613 | 36.4710 |
| 90 | 36.8808 | 37.2906 | 37.7004 | 38.1102 | 38.5120 | 38.9298 | 39.3396 | 39.7493 | 40.1591 | 40.5689 |



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## CONVERSION TABLE
### Ri to Miles

By definition: 1 ri = 5102352/2090880 or 2.440289 miles.

| RI | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 2.440 | 4.881 | 7.321 | 9.761 | 12.201 | 14.642 | 17.082 | 19.522 | 21.963 |
| 10 | 24.403 | 26.843 | 29.284 | 31.724 | 31.164 | 36.604 | 39.045 | 41.485 | 43.925 | 46.366 |
| 20 | 48.806 | 51.246 | 53.686 | 56.127 | 58.567 | 61.007 | 63.448 | 65.888 | 68.328 | 70.768 |
| 30 | 73.209 | 75.649 | 78.089 | 80.530 | 82.970 | 85.410 | 87.850 | 90.291 | 92.731 | 95.171 |
| 40 | 97.612 | 100.052 | 102.492 | 104.932 | 107.373 | 109.813 | 112.253 | 114.694 | 117.134 | 119.574 |
| 50 | 122.014 | 124.455 | 126.895 | 129.335 | 131.776 | 134.216 | 136.656 | 139.096 | 141.537 | 143.977 |
| 60 | 146.417 | 148.858 | 151.298 | 153.738 | 156.178 | 158.619 | 161.059 | 163.499 | 165.940 | 168.380 |
| 70 | 170.820 | 173.261 | 175.701 | 178.141 | 180.581 | 183.022 | 185.462 | 187.902 | 190.343 | 192.783 |
| 80 | 195.223 | 197.663 | 200.104 | 202.544 | 204.984 | 207.425 | 209.865 | 212.305 | 214.745 | 217.186 |
| 90 | 219.626 | 222.066 | 224.507 | 226.947 | 229.387 | 231.827 | 234.268 | 236.708 | 239.148 | 241.589 |



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## CONVERSION TABLE

### Square Feet to Tsubo (Bu)

By definition: 1 square foot = 1742400/61999876 or 0.0281033 tsubo.

| SQUARE FEET | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.0281 | 0.0562 | 0.0843 | 0.1124 | 0.1405 | 0.1686 | 0.1967 | 0.2248 | 0.2529 |
| 10 | 0.2810 | 0.3091 | 0.3372 | 0.3653 | 0.3934 | 0.4215 | 0.4497 | 0.4778 | 0.5059 | 0.5340 |
| 20 | 0.5620 | 0.5902 | 0.6183 | 0.6464 | 0.6745 | 0.7026 | 0.7307 | 0.7588 | 0.7869 | 0.8150 |
| 30 | 0.8431 | 0.8712 | 0.8993 | 0.9274 | 0.9553 | 0.9836 | 1.0117 | 1.0398 | 1.0679 | 1.0960 |
| 40 | 1.1241 | 1.1522 | 1.1803 | 1.2084 | 1.2365 | 1.2646 | 1.2928 | 1.3209 | 1.3490 | 1.3771 |
| 50 | 1.4052 | 1.4333 | 1.4614 | 1.4895 | 1.5176 | 1.5457 | 1.5738 | 1.6019 | 1.6300 | 1.6581 |
| 60 | 1.6862 | 1.7143 | 1.7424 | 1.7705 | 1.7986 | 1.8267 | 1.8548 | 1.8829 | 1.9110 | 1.9391 |
| 70 | 1.9672 | 1.9953 | 2.0234 | 2.0515 | 2.0796 | 2.1077 | 2.1359 | 2.1640 | 2.1921 | 2.2202 |
| 80 | 2.2483 | 2.2764 | 2.3045 | 2.3326 | 2.3607 | 2.3888 | 2.4169 | 2.4450 | 2.4731 | 2.5012 |
| 90 | 2.5293 | 2.5574 | 2.5855 | 2.6136 | 2.6417 | 2.6698 | 2.6979 | 2.7260 | 2.7541 | 2.7822 |

To convert from square feet to other Japa nese units move the decimal point in the table as follows: go and shaku - 1 and 2 places to the right.

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## CONVERSION TABLE

### Tsubo (bu) to Square Feet

By definition: 1 tsubo = 61999876/1742400 or 35.583033 square feet.

| TSUBO (bu) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 35.58 | 71.17 | 106.75 | 141.33 | 177.92 | 213.50 | 249.08 | 284.66 | 320.25 |
| 10 | 355.83 | 391.41 | 427.00 | 462.58 | 498.16 | 533.75 | 569.33 | 604.91 | 640.50 | 676.08 |
| 20 | 711.66 | 747.24 | 782.83 | 818.41 | 853.99 | 889.58 | 925.16 | 960.74 | 996.33 | 1031.91 |
| 30 | 1067.49 | 1103.07 | 1138.66 | 1174.24 | 1209.82 | 1245.41 | 1280.99 | 1316.57 | 1352.16 | 1387.74 |
| 40 | 1423.32 | 1458.90 | 1494.49 | 1530.07 | 1565.65 | 1601.24 | 1636.82 | 1672.40 | 1707.99 | 1743.57 |
| 50 | 1779.15 | 1814.73 | 1850.32 | 1885.90 | 1921.48 | 1957.07 | 1992.65 | 2028.23 | 2063.82 | 2099.40 |
| 60 | 2134.98 | 2170.57 | 2206.15 | 2241.73 | 2277.31 | 2312.90 | 2348.48 | 2384.06 | 2419.65 | 2455.23 |
| 70 | 2490.81 | 2526.40 | 2561.98 | 2597.56 | 2633.14 | 2668.73 | 2704.31 | 2739.89 | 2775.48 | 2811.06 |
| 80 | 2846,64 | 2882.23 | 2917.81 | 2953.39 | 2988.97 | 3024.56 | 3060.14 | 3095.72 | 3131.31 | 3166.89 |
| 90 | 3202.47 | 3238.06 | 3273.64 | 3309.22 | 3344.81 | 3380.39 | 3415.97 | 3451.55 | 3487.14 | 3522.72 |

To convert from other Japanese units to square feet move the decimal point in the table as follows:
gō and shaku - 1 and 2 places to the left.

## CONVERSION TABLE

### Acres to Tan

By definition: 1 acre = 252996480/61999876 or 4.0805965 tan.

| ACRES | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 4.081 | 8.161 | 12.242 | 16.322 | 20.403 | 24.484 | 28.564 | 32.645 | 36.725 |
| 10 | 40.806 | 44.887 | 48.967 | 53.048 | 57.128 | 61.209 | 65.290 | 69.370 | 73.451 | 77.531 |
| 20 | 81.612 | 85.693 | 89.773 | 93.854 | 97.934 | 102.015 | 106.096 | 110.176 | 114.258 | 118.337 |
| 30 | 122.418 | 126.498 | 130.579 | 134.660 | 138.740 | 142.821 | 146.901 | 150.982 | 155.063 | 159.143 |
| 40 | 163.224 | 167.304 | 171.385 | 175.466 | 179.546 | 183.627 | 187.707 | 191.788 | 195.869 | 199.949 |
| 50 | 204.030 | 208.110 | 212.191 | 216.272 | 220.352 | 224.433 | 228.513 | 232.594 | 236.675 | 240.755 |
| 60 | 244.836 | 248.916 | 252.997 | 257.078 | 261.158 | 265.239 | 269.320 | 273.540 | 277.481 | 281.561 |
| 70 | 285.642 | 289.722 | 293.803 | 297.884 | 301.964 | 306.045 | 310.125 | 314.206 | 318.287 | 322.367 |
| 80 | 326.448 | 330.528 | 334.609 | 338.690 | 342.770 | 346.851 | 350.931 | 355.012 | 358.092 | 363.176 |
| 90 | 367.254 | 371.334 | 375.415 | 379.495 | 383.576 | 387.657 | 391.739 | 395.818 | 399.898 | 403.979 |

To convert from acres to other Japanese units move the decimal point in the table as follows:
se - 1 place to the right.
chō (chōbu) - 1 place to the left.



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## CONVERSION TABLE

### Tan to Acres

By definition: 1 tan = 61999876/252996480 or 0.245062 acres.

| TAN | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.2451 | 0.4901 | 0.7352 | 0.9802 | 1.2253 | 1.4704 | 1.7154 | 1.9605 | 2.2056 |
| 10 | 2.4506 | 2.6957 | 2.9407 | 3.1858 | 3.4309 | 3.6759 | 3.9210 | 4.1661 | 4.4111 | 4.6562 |
| 20 | 4.9012 | 5.1463 | 5.3914 | 5.6364 | 5.8815 | 6.1266 | 6.3716 | 6.6168 | 6.8617 | 7.1068 |
| 30 | 7.3519 | 7.5969 | 7.8420 | 8.0870 | 8.3321 | 8.5772 | 8.8222 | 9.0673 | 9.3124 | 9.5574 |
| 40 | 9.8025 | 10.0475 | 10.2926 | 10.5377 | 10.7827 | 11.0278 | 11.2729 | 11.5179 | 11.7630 | 12.0080 |
| 50 | 12.2531 | 12.4982 | 12.4732 | 12.9883 | 13.2333 | 13.4784 | 13.7235 | 13.9685 | 14.2136 | 14.4587 |
| 60 | 14.7037 | 14.9488 | 15.1938 | 15.4389 | 15.6840 | 15.9290 | 16.1741 | 16.4192 | 16.6642 | 16.9093 |
| 70 | 17.1543 | 17.3994 | 17.6445 | 17.8895 | 18.1346 | 18.3797 | 18.6247 | 18.8698 | 19.1148 | 19.3599 |
| 80 | 19.6050 | 19.8500 | 20.0951 | 20.3401 | 20.5852 | 20.8303 | 21.0753 | 21.3204 | 21.5655 | 21.8105 |
| 90 | 22.0556 | 22.3006 | 22.5457 | 22.7908 | 23.0358 | 23.2809 | 23.5260 | 23.7710 | 24.0161 | 24.2611 |

To convert from other Japanese units to acres move the decimal point in the table as follows:
chō (chōbu) - 1 place to the right.
se - 1 place to the left.



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## CONVERSION TABLE
### Quarts to Shō

By definition: 1 quart = $7686525 \times 10^7 / 3937^3 \times 2401$ or 0.524616 shō.

| QUARTS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.5246 | 1.0492 | 1.5738 | 2.0985 | 2.6231 | 3.1477 | 3.6723 | 4.1969 | 4.7215 |
| 10 | 5.2462 | 5.7708 | 6.2954 | 6.8200 | 7.3446 | 7.8692 | 8.3989 | 8.9185 | 9.9431 | 9.9677 |
| 20 | 10.4923 | 11.0169 | 11.5416 | 12.0662 | 12.5908 | 13.1154 | 13.5600 | 14.1646 | 14.6892 | 15.2139 |
| 30 | 15.7385 | 16.2631 | 16.7877 | 17.3123 | 17.8369 | 18.3616 | 18.8862 | 19.4108 | 19.9354 | 20.4600 |
| 40 | 20.9846 | 21.5093 | 22.0339 | 22.5585 | 23.0831 | 23.6077 | 24.1323 | 24.6570 | 25.1816 | 25.7062 |
| 50 | 26.2308 | 26.7554 | 27.2800 | 27.8046 | 28.3293 | 28.8539 | 29.3785 | 29.9031 | 30.4277 | 30.9523 |
| 60 | 31.4770 | 32.0016 | 32.5262 | 33.0508 | 33.5754 | 34.1000 | 34.6267 | 35.1493 | 35.6739 | 36.1985 |
| 70 | 36.7231 | 37.2477 | 37.7724 | 38.2970 | 38.8216 | 39.3462 | 39.8708 | 40.3954 | 40.9200 | 41.4447 |
| 80 | 41.9693 | 42.4939 | 43.0185 | 43.5431 | 44.0677 | 44.5924 | 45.1170 | 46.6416 | 46.1662 | 46.6908 |
| 90 | 47.2154 | 47.7401 | 48.2647 | 48.7893 | 49.3139 | 49.8385 | 50.3631 | 50.8878 | 51.4124 | 51.9370 |

To convert from quarts to other Japanese units move the decimal point in the table as follows:
gō and shaku - 1 and 2 places to the right.
to - 1 place to the left.



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## CONVERSION TABLE

### Shō to Quarts

By definition: 1 sho = $3937^3$ x 2401/7686525 x $10^7$ or 1.906156 quarts.

| SHŌ | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 1.906 | 3.812 | 5.719 | 7.625 | 9.531 | 11.437 | 13.343 | 15.249 | 17.155 |
| 10 | 19.062 | 20.968 | 22.874 | 24.780 | 26.686 | 28.592 | 30.499 | 32.405 | 34.311 | 36.217 |
| 20 | 38.123 | 40.029 | 41.935 | 43.842 | 45.748 | 47.654 | 49.560 | 51.466 | 53.372 | 55.279 |
| 30 | 57.185 | 59.091 | 60.997 | 62.903 | 64.809 | 66.716 | 68.622 | 70.527 | 72.434 | 74.340 |
| 40 | 76.246 | 78.152 | 80.059 | 81.965 | 83.871 | 85.777 | 87.683 | 89.589 | 91.496 | 93.402 |
| 50 | 95.308 | 97.214 | 99.120 | 101.206 | 102.932 | 104.839 | 106.745 | 108.651 | 110.557 | 112.463 |
| 60 | 114.369 | 116.276 | 118.182 | 120.088 | 121.994 | 123.900 | 125.806 | 127.712 | 129.619 | 131.525 |
| 70 | 133.431 | 135.337 | 137.243 | 139.149 | 141.056 | 142.962 | 144.868 | 146.774 | 148.680 | 150.586 |
| 80 | 152.492 | 154.399 | 156.305 | 158.211 | 161.117 | 162.023 | 163.929 | 165.836 | 167.742 | 167.678 |
| 90 | 171.554 | 173.460 | 175.366 | 177.273 | 179.179 | 181.085 | 182.991 | 184.897 | 186.803 | 188.709 |

To convert from other Japanese units to quarts move the decimal point in the table as follows:
to - 1 place to the right
gō and shaku - 1 and 2 places to the left.

## CONVERSION TABLE
### Gallons to Shō

By definition: 1 gallon = 307461 x $10^9/3937^3$ x 2401 or 2.0984645 shō.

| GAL-LONS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 2.095 | 4.197 | 6.295 | 8.394 | 10.492 | 12.591 | 14.689 | 16.787 | 18.886 |
| 10 | 20.985 | 23.083 | 25.182 | 27.230 | 29.379 | 31.477 | 33.575 | 35.674 | 37.772 | 39.871 |
| 20 | 41.969 | 44.068 | 46.166 | 48.265 | 50.363 | 52.462 | 54.560 | 56.659 | 58.757 | 60.856 |
| 30 | 62.954 | 65.052 | 67.151 | 69.249 | 71.348 | 73.446 | 75.545 | 77.643 | 79.742 | 81.840 |
| 40 | 83.939 | 86.037 | 88.136 | 90.234 | 92.332 | 94.431 | 96.530 | 98.628 | 100.726 | 102.825 |
| 50 | 104.923 | 107.022 | 109.120 | 111.219 | 113.317 | 115.416 | 117.514 | 119.612 | 121.711 | 123.809 |
| 60 | 125.908 | 128.006 | 130.105 | 132.203 | 134.302 | 136.400 | 138.499 | 140.597 | 142.696 | 144.794 |
| 70 | 146.893 | 148.991 | 151.089 | 153.188 | 155.286 | 157.385 | 159.483 | 161.582 | 163.680 | 165.779 |
| 80 | 167.877 | 169.976 | 172.074 | 174.173 | 176.271 | 178.369 | 180.468 | 182.566 | 184.665 | 186.763 |
| 90 | 188.862 | 190.960 | 193.059 | 195.157 | 197.256 | 199.354 | 201.453 | 203.551 | 205.650 | 207.748 |

To convert from gallons to other Japanese units move the decimal point in the table as follows:
gō and shaku - 1 and 2 places to the right.
to - 1 place to the left.



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## CONVERSION TABLE

### Shō to Gallons

By definition: 1 sho = $3937^3$ x 2401/307461 x $10^9$ or 0.476539 gallon.

| SHŌ | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.4765 | 0.9531 | 1.4296 | 1.9062 | 2.3827 | 2.8592 | 3.3358 | 3.8123 | 4.2889 |
| 10 | 4.7654 | 5.2319 | 5.7185 | 6.1950 | 6.6715 | 7.1481 | 7.6246 | 8.1012 | 8.5777 | 9.0542 |
| 20 | 9.5308 | 10.0073 | 10.4839 | 10.9604 | 11.4369 | 11.9135 | 12.3900 | 12.8666 | 13.3431 | 13.8196 |
| 30 | 14.2962 | 14.7727 | 15.2492 | 15.7258 | 16.2023 | 16.6789 | 17.1554 | 17.6319 | 18.1085 | 18.5850 |
| 40 | 19.0616 | 19.5381 | 20.0146 | 20.4912 | 20.9677 | 21.4443 | 21.9208 | 22.2973 | 22.8739 | 23.3504 |
| 50 | 23.8270 | 24.3035 | 24.7800 | 25.2566 | 25.7331 | 26.2096 | 26.6862 | 27.1627 | 27.6393 | 28.1158 |
| 60 | 28.5923 | 29.0689 | 29.5454 | 30.0220 | 30.4985 | 30.9750 | 31.4516 | 31.9281 | 32.4047 | 32.8812 |
| 70 | 33.3577 | 33.8343 | 34.3108 | 34.7873 | 35.2639 | 35.7404 | 36.2170 | 36.6935 | 37.1700 | 37.6466 |
| 80 | 38.1231 | 38.5997 | 39.0762 | 39.5527 | 40.0293 | 40.5058 | 40.9824 | 41.4589 | 41.9354 | 42.4120 |
| 90 | 42.8885 | 43.3650 | 43.8416 | 44.3181 | 44.7947 | 45.2712 | 45.7477 | 26.2243 | 46.7008 | 47.1774 |

To convert from other Japanese units to gallons move the decimal point in the table as follows:
to [illegible] 1 place to the right.
gō and shaku - 1 and 2 places to the left.

## CONVERSION TABLE

### Bushels to Koku

By definition: 1 bushel = $286220902 \times 10^5 / 3937^3 \times 2401$ or 0.195350 koku.

| BUSHELS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.1954 | 0.3907 | 0.5861 | 0.7814 | 0.9768 | 1.1721 | 1.3675 | 1.5628 | 1.7582 |
| 10 | 1.9535 | 2.1489 | 2.3442 | 2.5396 | 2.7349 | 2.9303 | 3.1256 | 3.3210 | 3.5163 | 3.7117 |
| 20 | 3.9070 | 4.1024 | 4.2977 | 4.4931 | 4.6884 | 4.8838 | 5.0791 | 5.2745 | 5.4698 | 5.6652 |
| 30 | 5.8605 | 6.0359 | 6.2512 | 6.4466 | 6.6419 | 6.8373 | 7.0326 | 7.2280 | 7.4233 | 7.6187 |
| 40 | 7.8140 | 8.0094 | 8.2047 | 8.4001 | 8.5954 | 8.7908 | 8.9861 | 9.1915 | 9.3768 | 9.5722 |
| 50 | 9.7675 | 9.9629 | 10.1582 | 10.3536 | 10.5489 | 10.7443 | 10.9396 | 11.1350 | 11.3303 | 11.5257 |
| 60 | 11.7210 | 11.9164 | 12.1117 | 12.3071 | 12.5024 | 12.6978 | 12.8931 | 13.0885 | 13.2838 | 13.4792 |
| 70 | 13.6745 | 13.8699 | 14.0652 | 14.2601 | 14.4559 | 14.6513 | 14.8466 | 15.0420 | 15.2373 | 15.4327 |
| 80 | 15.6280 | 15.8234 | 16.0187 | 16.2141 | 16.4094 | 16.6048 | 16.8001 | 16.9955 | 17.1908 | 17.3862 |
| 90 | 17.5815 | 17.7769 | 17.9722 | 18.1676 | 18.3629 | 18.5583 | 18.7536 | 18.9490 | 19.1443 | 19.3397 |

To convert from bushels to other Japanese units move the decimal point in the table as follows: tō, shō, go, and shaku - 1, 2, 3, and 4 places to the right.



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## CONVERSION TABLE

### Koku to Bushels

By definition: 1 koku = $3937^3$ x 2401/286220902 x $10^5$ or 5.119023 bushels.

| KOKU | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 5.119 | 10.238 | 15.357 | 20.476 | 25.595 | 30.714 | 35.833 | 40.952 | 46.071 |
| 10 | 51.190 | 56.309 | 61.428 | 66.547 | 71.666 | 76.785 | 81.904 | 87.023 | 92.142 | 97.261 |
| 20 | 102.380 | 107.499 | 112.619 | 117.738 | 122.857 | 127.956 | 133.095 | 138.214 | 143.333 | 148.452 |
| 30 | 153.571 | 158.690 | 163.809 | 168.928 | 170.067 | 179.166 | 184.285 | 189.404 | 194.523 | 199.642 |
| 40 | 204.761 | 209.880 | 21 .999 | 220.118 | 225.237 | 230.356 | 235.475 | 240.594 | 45.713 | 250.832 |
| 50 | 255.951 | 261.070 | 266.189 | 271.308 | 276.427 | 281.546 | 286.665 | 291.784 | 296.903 | 302.022 |
| 60 | 307.141 | 312.260 | 317.379 | 322.498 | 327.617 | 332.736 | 337.856 | 342.975 | 348.094 | 353.213 |
| 70 | 358.332 | 363.451 | 368.570 | 373.689 | 378.808 | 383.927 | 389.046 | 394.165 | 399.284 | 404.403 |
| 80 | 409.522 | 414.641 | 419.760 | 424.879 | 429.998 | 435.117 | 440.236 | 445.355 | 450.474 | 455.593 |
| 90 | 460.712 | 465.831 | 470.950 | 476.069 | 481.188 | 486.307 | 491.426 | 496.545 | 501.664 | 506.783 |

To convert from other Japanese units to bushels move the decimal point in the table as follows: to, shō, gō, and shaku - 1, 2, 3, and 4 places to the left.



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## CONVERSION TABLE

### Bushels to Hyo

By definition: 1 bushel = $715552255 \times 10^5 / 3937^3 \times 2401$ or 0.488374 hyo.

| BUSHELS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.4884 | 0.9767 | 1.4651 | 1.9535 | 2.4419 | 2.9302 | 3.4186 | 3.9070 | 4.3954 |
| 10 | 4.8837 | 5.3721 | 5.8605 | 6.3489 | 6.8372 | 7.3256 | 7.8140 | 8.3024 | 8.7907 | 9.2791 |
| 20 | 9.7675 | 10.2559 | 10.7442 | 11.2326 | 11.7210 | 12.2094 | 12.6977 | 13.1861 | 13.6745 | 14.1628 |
| 30 | 14.6512 | 15.1356 | 15.6280 | 16.1163 | 16.6047 | 17.0931 | 17.5815 | 18.0698 | 18.5582 | 19.0466 |
| 40 | 19.5350 | 20.0233 | 20.5117 | 21.0001 | 21.4885 | 21.9768 | 22.4652 | 22.9536 | 23.4420 | 23.9303 |
| 50 | 24.4187 | 24.9071 | 25.3954 | 25.8838 | 26.3722 | 26.8606 | 27.3489 | 27.8373 | 28.3257 | 28.8141 |
| 60 | 29.3024 | 29.7908 | 30.2792 | 30.7676 | 31.2559 | 31.7443 | 32.2327 | 32.7211 | 33.2094 | 33.6978 |
| 70 | 34.1862 | 34.6746 | 35.1629 | 35.6513 | 36.1397 | 36.6281 | 37.1164 | 37.6078 | 38.0932 | 38.5815 |
| 80 | 39.0699 | 39.5583 | 40.0467 | 40.5350 | 41.0234 | 41.5118 | 42.0002 | 42.4885 | 42.9769 | 43.4653 |
| 90 | 43.9537 | 44.4420 | 44.9304 | 45.4188 | 45.9072 | 46.3955 | 46.8839 | 47.3723 | 47.8607 | 48.3890 |

## CONVERSION TABLE
### Hyo to Bushels

By definition: 1 hyo = $3937^3$ x 2401/715552255 x $10^5$ or 2.0476091 bushels.

| HYO | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 2.048 | 4.095 | 6.143 | 8.190 | 10.238 | 12.286 | 14.333 | 16.381 | 18.428 |
| 10 | 20.476 | 22.524 | 24.571 | 26.619 | 28.667 | 30.714 | 32.762 | 34.809 | 36.857 | 38.905 |
| 20 | 40.952 | 42.800 | 45.047 | 47.095 | 49.143 | 51.190 | 53.238 | 55.285 | 57.333 | 59.381 |
| 30 | 61.428 | 63.476 | 65.523 | 67.571 | 69.619 | 71.666 | 73.714 | 75.762 | 77.809 | 79.857 |
| 40 | 81.904 | 83.952 | 86.000 | 88.047 | 90.095 | 92.142 | 94.190 | 96.238 | 98.285 | 100.333 |
| 50 | 102.380 | 104.428 | 106.476 | 108.523 | 110.571 | 112.619 | 114.666 | 116.714 | 118.761 | 120.809 |
| 60 | 122.857 | 124.904 | 126.952 | 128.999 | 131.047 | 133.095 | 135.142 | 137.190 | 139.237 | 141.285 |
| 70 | 143.333 | 145.380 | 147.428 | 149.475 | 151.523 | 153.571 | 155.618 | 157.666 | 159.714 | 161.761 |
| 80 | 163.809 | 165.856 | 167.904 | 169.952 | 171.999 | 174.047 | 176.094 | 178.142 | 180.190 | 182.237 |
| 90 | 184.285 | 186.332 | 188.380 | 190.428 | 192.475 | 194.523 | 196.570 | 198.618 | 200.666 | 202.713 |



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## CONVERSION TABLE

### Pounds to Momme

By definition: 1 pound = 45359.24277/375 or 120.957981 momme.

| POUNDS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 121.0 | 241.9 | 362.9 | 483.8 | 604.8 | 725.7 | 846.7 | 967.7 | 1088.6 |
| 10 | 1209.6 | 1330.5 | 1451.5 | 1572.5 | 1693.4 | 1814.4 | 1935.3 | 2056.3 | 2177.2 | 2298.2 |
| 20 | 2419.2 | 2540.1 | 2661.1 | 2782.0 | 2903.0 | 3023.9 | 3144.9 | 3265.9 | 3386.8 | 3507.8 |
| 30 | 3628.7 | 3749.7 | 3870.7 | 3991.6 | 4112.6 | 4233.5 | 4354.5 | 4475.4 | 4596.4 | 4717.4 |
| 40 | 4838.3 | 4959.3 | 5080.2 | 5201.2 | 5322.2 | 5443.1 | 5564.1 | 5685.0 | 5806.0 | 5926.9 |
| 50 | 6047.9 | 6168.9 | 6289.8 | 6410.8 | 6531.7 | 6652.7 | 6773.6 | 6894.6 | 7015.6 | 7136.5 |
| 60 | 7257.5 | 7378.4 | 7499.4 | 7620.4 | 7741.3 | 7862.3 | 7983.2 | 8104.2 | 8225.1 | 8346.1 |
| 70 | 8467.1 | 8588.0 | 8709.0 | 8829.9 | 8950.9 | 9071.8 | 9192.8 | 9193.8 | 9434.7 | 9555.7 |
| 80 | 9676.6 | 9797.6 | 9918.6 | 10039.5 | 10160.5 | 10281.4 | 10402.4 | 10523.3 | 10644.3 | 10765.3 |
| 90 | 10886.2 | 11007.2 | 11128.1 | 11249.1 | 11370.1 | 11491.0 | 11612.0 | 11732.9 | 11853.9 | 11974.8 |

To convert from pounds to other Japanese units move the decimal point in the table as follows:
fun, rin, and mo - 1, 2, and 3 places to the right.
kan (kwan) - 3 places to the left.



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## CONVERSION TABLE

### Momme to Pounds

By definition: 1 momme = 375/45359.24277 or 0.(2)826733 pounds.

| MOMME | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.0083 | 0.0165 | 0.0248 | 0.0331 | 0.0413 | 0.0496 | 0.0579 | 0.0661 | 0.0744 |
| 10 | 0.0827 | 0.0909 | 0.0992 | 0.1075 | 0.1157 | 0.1240 | 0.1323 | 0.1405 | 0.1488 | 0.1571 |
| 20 | 0.1653 | 0.1736 | 0.1819 | 0.1901 | 0.1984 | 0.2067 | 0.2150 | 0.2232 | 0.2315 | 0.2398 |
| 30 | 0.2480 | 0.2563 | 0.2646 | 0.2728 | 0.2811 | 0.2894 | 0.2976 | 0.3059 | 0.3142 | 0.3224 |
| 40 | 0.3307 | 0.3390 | 0.3472 | 0.3555 | 0.3638 | 0.3720 | 0.3803 | 0.3886 | 0.3968 | 0.4051 |
| 50 | 0.4134 | 0.4216 | 0.4299 | 0.4382 | 0.4464 | 0.4547 | 0.4630 | 0.4712 | 0.4795 | 0.4878 |
| 60 | 0.4960 | 0.5043 | 0.5126 | 0.5208 | 0.5291 | 0.5374 | 0.5456 | 0.5539 | 0.5622 | 0.5704 |
| 70 | 0.5787 | 0.5870 | 0.5952 | 0.6035 | 0.6118 | 0.6200 | 0.6283 | 0.6366 | 0.6449 | 0.6531 |
| 80 | 0.6614 | 0.6697 | 0.6779 | 0.6862 | 0.6945 | 0.7027 | 0.7110 | 0.7123 | 0.7275 | 0.7358 |
| 90 | 0.7441 | 0.7523 | 0.7606 | 0.7689 | 0.7771 | 0.7854 | 0.7937 | 0.8019 | 0.8102 | 0.8185 |

To convert from other Japanese units to pounds move the decimal point in the table as follows:
Kan (kwan) - 3 places to the right.
fun, rin, and mo - 1, 2, and 3 places to the left.



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## CONVERSION TABLE
### Pounds to Kin

By definition: 1 pound = 4.535924277/6 or 0.755987 kin.

| POUNDS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.7560 | 1.5120 | 2.2680 | 3.0239 | 3.7799 | 4.5359 | 5.2919 | 6.0479 | 6.8039 |
| 10 | 7.5599 | 8.3159 | 9.0718 | 9.8278 | 10.5838 | 11.3398 | 12.0958 | 12.8518 | 13.6078 | 14.3638 |
| 20 | 15.1197 | 15.8757 | 16.6317 | 17.3877 | 18.1437 | 18.8997 | 19.6557 | 20.4116 | 21.1676 | 21.9236 |
| 30 | 22.67.6 | 23.4356 | 24.1916 | 24.9476 | 25.7036 | 26.4595 | 27.2155 | 27.9715 | 28.7275 | 29.4835 |
| 40 | 30.2395 | 30.9955 | 31.7515 | 32.5074 | 33.2634 | 34.0194 | 34.7754 | 35.5314 | 36.2874 | 37.0434 |
| 50 | 37.7994 | 38.5553 | 39.3113 | 40.0673 | 40.8233 | 41.5793 | 42.3353 | 43.0913 | 43.8472 | 44.6032 |
| 60 | 45.3592 | 46.1152 | 46.8712 | 47.6272 | 48.3832 | 49.1392 | 49.8951 | 50.6511 | 51.4071 | 52.1631 |
| 70 | 52.9191 | 53.6751 | 54.4311 | 55.1871 | 55.9430 | 56.6990 | 57.4550 | 58.2110 | 58.9670 | 59.7230 |
| 80 | 60.4790 | 61.2349 | 61.9909 | 62.7469 | 63.5029 | 64.2589 | 65.0149 | 65.7709 | 66.5269 | 67.2828 |
| 90 | 68.0388 | 68.7948 | 69.5508 | 70.3068 | 71.0628 | 71.8188 | 72.5748 | 73.3307 | 74.0867 | 74.8427 |



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## CONVERSION TABLE

### Kin to Pounds

By definition: 1 kin = 6/4.535924277 or 1.322773 pounds.

| KIN | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 1.322 | 2.645 | 3.968 | 5.291 | 6.613 | 7.936 | 9.259 | 10.582 | 11.905 |
| 10 | 13.227 | 14.550 | 15.873 | 17.196 | 18.518 | 19.841 | 21.164 | 22.487 | 23.809 | 25.132 |
| 20 | 26.455 | 27.778 | 29.101 | 30.423 | 31.747 | 33.069 | 34.392 | 35.715 | 37.038 | 38.360 |
| 30 | 39.683 | 41.006 | 42.329 | 43.652 | 44.974 | 46.297 | 47.620 | 48.943 | 50.265 | 51.588 |
| 40 | 52.911 | 54.234 | 55.556 | 56.879 | 58.202 | 59.525 | 60.848 | 62.170 | 63.493 | 64.816 |
| 50 | 66.387 | 67.461 | 68.784 | 70.107 | 71.430 | 72.753 | 74.075 | 75.398 | 76.721 | 78.044 |
| 60 | 79.366 | 80.689 | 82.012 | 83.335 | 84.657 | 85.980 | 87.303 | 88.626 | 89.949 | 91.271 |
| 70 | 92.594 | 93.917 | 95.240 | 96.562 | 97.885 | 99.208 | 100.531 | 101.854 | 103.176 | 104.499 |
| 80 | 105.822 | 107.145 | 108.467 | 109.790 | 111.113 | 112.436 | 113.758 | 115.081 | 116.404 | 117.727 |
| 90 | 119.050 | 120.372 | 121.695 | 123.018 | 124.341 | 125.663 | 126.986 | 128.309 | 129.632 | 130.955 |



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## CONVERSION TABLE

### Miles to Kilometers

By definition: 1 mile = 6336000/3937 or 1.609347 kilometers.

| MILE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 1.61 | 3.22 | 4.83 | 6.44 | 8.05 | 9.66 | 11.27 | 12.87 | 14.48 |
| 10 | 16.09 | 17.70 | 19.31 | 20.92 | 22.53 | 24.14 | 25.75 | 27.36 | 28.97 | 30.58 |
| 20 | 32.19 | 33.80 | 35.41 | 37.01 | 38.62 | 40.23 | 41.84 | 43.45 | 45.06 | 46.67 |
| 30 | 48.28 | 49.89 | 51.50 | 53.11 | 54.72 | 56.33 | 57.94 | 59.55 | 61.16 | 62.76 |
| 40 | 64.37 | 65.98 | 67.59 | 69.20 | 70.81 | 72.42 | 74.03 | 75.64 | 77.25 | 78.86 |
| 50 | 80.47 | 82.08 | 83.69 | 85.30 | 86.90 | 88.51 | 90.12 | 91.73 | 93.34 | 94.95 |
| 60 | 96.56 | 98.17 | 99.78 | 101.39 | 103.00 | 104.61 | 106.22 | 107.83 | 109.44 | 111.04 |
| 70 | 112.65 | 114.26 | 115.87 | 117.48 | 119.09 | 120.70 | 122.31 | 123.92 | 125.53 | 127.14 |
| 80 | 128.75 | 130.36 | 131.97 | 133.58 | 135.19 | 136.79 | 138.40 | 140.01 | 141.62 | 143.23 |
| 90 | 144.84 | 146.45 | 148.06 | 149.67 | 151.28 | 152.89 | 154.50 | 156.11 | 157.72 | 159.33 |

To convert from miles to other metric units move the decimal point in the table as follows:

Myriameter - one place to the left.
Hectometer, dekameter, meter, etc. - 1, 2, 3, etc., places to the right.



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## CONVERSION TABLE

### Kilometers to Miles

By definition: 1 kilometer = 3937/6336000 or 0.621370 miles.

| KILO-METRS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.621 | 1.243 | 1.864 | 2.485 | 3.107 | 3.728 | 4.350 | 4.971 | 5.592 |
| 10 | 6.214 | 6.835 | 7.456 | 8.078 | 8.699 | 9.321 | 9.942 | 10.563 | 11.185 | 11.806 |
| 20 | 12.427 | 13.049 | 13.670 | 14.292 | 14.913 | 15.534 | 16.156 | 16.777 | 17.398 | 18.020 |
| 30 | 18.641 | 19.262 | 19.884 | 20.505 | 21.127 | 21.748 | 22.369 | 22.991 | 23.612 | 24.233 |
| 40 | 24.855 | 25.476 | 26.098 | 26.719 | 27.340 | 27.962 | 28.583 | 29.204 | 29.826 | 30.447 |
| 50 | 31.068 | 31.690 | 32.311 | 32.933 | 33.554 | 34.175 | 34.797 | 35.418 | 36.039 | 36.661 |
| 60 | 37.282 | 37.904 | 38.525 | 39.146 | 39.768 | 40.389 | 41.010 | 41.632 | 42.253 | 42.875 |
| 70 | 43.496 | 44.117 | 44.739 | 45.360 | 45.981 | 46.603 | 47.224 | 47.845 | 48.467 | 49.088 |
| 80 | 49.710 | 50.331 | 50.952 | 51.574 | 52.195 | 52.816 | 53.438 | 54.059 | 54.681 | 55.302 |
| 90 | 55.923 | 56.545 | 57.166 | 57.787 | 58.409 | 59.030 | 59.652 | 60.273 | 60.894 | 61.516 |



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## CONVERSION TABLE

### Feet to Meters

By definition: 1 foot = 1200/3937 or 0.304801 meter.

| FEET | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.305 | 0.610 | 0.914 | 1.219 | 1.524 | 1.829 | 2.134 | 2.438 | 2.743 |
| 10 | 3.048 | 3.353 | 3.658 | 3.962 | 4.267 | 4.572 | 4.877 | 5.182 | 5.486 | 5.791 |
| 20 | 6.096 | 6.401 | 6.706 | 7.010 | 7.315 | 7.620 | 7.925 | 8.230 | 8.534 | 8.839 |
| 30 | 9.144 | 9.449 | 9.754 | 10.058 | 10.363 | 10.668 | 10.973 | 11.278 | 11.582 | 11.887 |
| 40 | 12.192 | 12.497 | 12.802 | 13.106 | 13.411 | 13.716 | 14.021 | 14.226 | 14.630 | 14.935 |
| 50 | 15.240 | 15.545 | 15.850 | 16.154 | 16.459 | 16.764 | 17.069 | 17.374 | 17.678 | 17.983 |
| 60 | 18.288 | 18.593 | 18.898 | 19.202 | 19.507 | 19.812 | 20.117 | 20.422 | 20.726 | 21.031 |
| 70 | 21.336 | 21.641 | 21.946 | 22.250 | 22.555 | 22.860 | 23.165 | 23.470 | 23.774 | 24.079 |
| 80 | 24.384 | 24.689 | 24.994 | 25.298 | 25.603 | 25.908 | 26.213 | 26.518 | 26.822 | 27.127 |
| 90 | 27.432 | 27.737 | 28.042 | 28.346 | 2 8.651 | 28.956 | 29.261 | 29.566 | 29.870 | 30.175 |

To convert from feet to other metric units move the decimal point in the table as follows:
Decimeter, centimeter, and millimeter -- 1, 2, and 3 places to the right.
Dekameter, hectometer, kilometer, and myriameter -- 1, 2, 3, and 4 places to the left.



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## CONVERSION TABLE
### Meters to Feet

By definition: 1 meter = 3937/1200 or 3.280833 feet.

| METERS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 3.28 | 6.56 | 9.84 | 13.12 | 16.40 | 19.68 | 22.97 | 26.25 | 29.53 |
| 10 | 32.81 | 36.09 | 39.37 | 42.65 | 45.93 | 49.21 | 52.49 | 55.77 | 59.06 | 62.34 |
| 20 | 65.62 | 68.90 | 72.18 | 75.46 | 78.74 | 82.02 | 85.30 | 88.58 | 91.86 | 95.14 |
| 30 | 98.42 | 101.71 | 104.99 | 108.27 | 111.55 | 114.83 | 118.11 | 121.39 | 124.67 | 127.95 |
| 40 | 131.23 | 134.51 | 137.80 | 141.08 | 144.36 | 147.64 | 150.92 | 154.20 | 157.48 | 160.76 |
| 50 | 164.04 | 167.37 | 170.60 | 173.88 | 177.16 | 180.45 | 183.73 | 187.01 | 190.29 | 193.57 |
| 60 | 196.85 | 200.13 | 203.41 | 206.69 | 209.97 | 213.25 | 216.54 | 219.82 | 223.10 | 226.38 |
| 70 | 229.66 | 232.94 | 236.22 | 239.50 | 242.78 | 246.06 | 249.34 | 252.62 | 255.90 | 259.19 |
| 80 | 262.47 | 265.75 | 269.03 | 272.31 | 275.59 | 278.87 | 282.15 | 285.43 | 288.71 | 291.99 |
| 90 | 295.28 | 298.56 | 301.84 | 305.12 | 308.40 | 311.68 | 314.96 | 318.24 | 321.52 | 324.80 |

To convert from other metric units to feet move the decimal point in the table as follows:
Dekameter, hectometer, kilometer, and myriameter - 1, 2, 3, and 4 places to the right.
Decimeter, centimeter, and millimeter - 1, 2, and 3 places to the left.

## CONVERSION TABLE

### Inches to Centimeters

By definition: 1 inch = 10000/3937 or 2.540005 centimeters.

| INCHES | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 2.540 | 5.080 | 7.620 | 10.160 | 12.700 | 15.240 | 17.780 | 20.320 | 22.860 |
| 10 | 25.400 | 27.940 | 30.480 | 33.020 | 35.560 | 38.100 | 40.640 | 43.180 | 45.720 | 48.260 |
| 20 | 50.800 | 53.340 | 55.880 | 58.420 | 60.960 | 63.500 | 66.040 | 68.580 | 71.120 | 73.660 |
| 30 | 76.200 | 78.740 | 81.280 | 83.820 | 86.360 | 88.900 | 91.440 | 93.980 | 96.520 | 99.060 |
| 40 | 101.600 | 104.140 | 106.680 | 109.220 | 111.760 | 114.300 | 116.840 | 119.380 | 121.920 | 124.460 |
| 50 | 127.000 | 129.540 | 132.080 | 134.620 | 137.160 | 139.700 | 142.240 | 144.780 | 147.320 | 149.860 |
| 60 | 152.400 | 154.940 | 157.480 | 160.020 | 162.560 | 165.100 | 167.640 | 170.180 | 172.720 | 175.260 |
| 70 | 177.800 | 180.340 | 182.880 | 185.420 | 187.960 | 190.500 | 193.040 | 195.580 | 198.120 | 200.660 |
| 80 | 203.200 | 205.740 | 208.820 | 210.820 | 213.360 | 215.900 | 218.440 | 220.980 | 223.520 | 226.060 |
| 90 | 228.600 | 231.140 | 233.680 | 236.220 | 238.760 | 214.300 | 243.840 | 246.380 | 248.920 | 251.460 |

To convert from inches to other metric units move the decimal point in the table as follows:
Millimeter - 1 place to the right.
Decimeter, meter, etc. - 1, 2, etc., places to the left.



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## CONVERSION TABLE

### Centimeters to Inches

By definition: 1 centimeter = 3937/10000 or 0.3937 inches.

| CENTI-METERS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.3937 | 0.7874 | 1.1811 | 1.5748 | 1.9685 | 2.3622 | 2.7559 | 3.1496 | 3.5433 |
| 10 | 3.9370 | 4.3307 | 4.7244 | 5.1181 | 5.5118 | 5.9055 | 6.2992 | 6.6929 | 7.0866 | 7.4803 |
| 20 | 7.8740 | 8.2677 | 8.6614 | 9.0551 | 9.4488 | 9.8425 | 10.2362 | 10.6299 | 11.0236 | 11.4173 |
| 30 | 11.8110 | 12.2047 | 12.5984 | 12.9921 | 13.3858 | 13.7795 | 14.1732 | 14.5669 | 14.9606 | 15.3543 |
| 40 | 15.7480 | 16.1417 | 16.5354 | 16.9291 | 17.3228 | 17.7165 | 18.1102 | 18.5039 | 18.8976 | 19.2913 |
| 50 | 19.6850 | 20.0787 | 20.4724 | 20.8661 | 21.2598 | 21.6535 | 22.0472 | 22.4409 | 22.8346 | 23.2283 |
| 60 | 23.6220 | 24.0157 | 24.4094 | 24.8031 | 25.1968 | 25.5905 | 25.9842 | 26.3779 | 26.7716 | 27.1753 |
| 70 | 27.5590 | 27.9527 | 28.3464 | 28.7401 | 29.1338 | 29.5275 | 29.9212 | 30.3149 | 30.7086 | 31.1023 |
| 80 | 31.4960 | 31.8897 | 32.2834 | 32.6771 | 33.0708 | 33.4645 | 33.8582 | 34.2519 | 34.6456 | 35.0393 |
| 90 | 35.5330 | 36.8267 | 36.2204 | 36.6141 | 37.0078 | 37.4015 | 37.7952 | 38.1889 | 38.5826 | 38.9763 |

To convert from other metric units to inches move the decimal point in the table as follows:
Decimeter, meter, etc. - 1, 2, etc., places to the right.
Millimeter - 1 place to the left.



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## CONVERSION TABLE

### Square Feet to Square Meters

By definition: 1 square foot = $(1200/3937)^2$ or 0.0929034 square meters.

| SQUARE FEET | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.0929 | 0.1858 | 0.2787 | 0.3716 | 0.4645 | 0.5574 | 0.6503 | 0.7432 | 0.8361 |
| 10 | 0.9290 | 1.0219 | 1.1148 | 1.2077 | 1.3006 | 1.3936 | 1.4865 | 1.5794 | 1.6723 | 1.7652 |
| 20 | 1.8581 | 1.9510 | 2.0439 | 2.1368 | 2.2297 | 2.3226 | 2.4155 | 2.5084 | 2.6013 | 2.6942 |
| 30 | 2.7871 | 2.8800 | 2.9729 | 3.0658 | 3.1587 | 3.2516 | 3.3445 | 3.4374 | 3.5303 | 3.6232 |
| 40 | 3.7161 | 3.8090 | 3.9019 | 3.9948 | 4.0877 | 4.1807 | 4.2736 | 4.3665 | 4.4594 | 4.5523 |
| 50 | 4.6452 | 4.7381 | 4.8310 | 4.9239 | 5.0168 | 5.1097 | 5.2026 | 5.2955 | 5.3884 | 5.4813 |
| 60 | 5.5742 | 5.6671 | 5.7600 | 5.8529 | 5.9458 | 6.0387 | 6.1316 | 6.2245 | 6.3174 | 6.4103 |
| 70 | 6.5032 | 6.5961 | 6.6890 | 6.7819 | 6.8749 | 6.9678 | 7.0607 | 7.1536 | 7.2465 | 7.3394 |
| 80 | 7.4323 | 7.5252 | 7.6181 | 7.7110 | 7.8039 | 7.8968 | 7.9897 | 8.0826 | 8.1755 | 8.2684 |
| 90 | 8.3613 | 8.4542 | 8.5471 | 8.6400 | 8.7329 | 8.8258 | 8.9187 | 9.0116 | 9.1045 | 9.1974 |

To convert from square feet to other metric units move the decimal point in the table as follows:
Square dekameter, square hectometer, and square kilometer - 2, 4, and 6 places to the left.
Square decimeter, square centimeter, and square millimeter - 2, 4, and 6 places to the right.



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## CONVERSION TABLE

### Square Meters to Square Feet

By definition: 1 square meter = $(3937/1200)^2$ or 10.763867 square feet.

| SQUARE METERS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 10.76 | 21.53 | 32.29 | 43.06 | 53.82 | 64.58 | 75.35 | 86.11 | 96.88 |
| 10 | 107.64 | 118.42 | 129.17 | 139.93 | 150.69 | 161.46 | 172.22 | 182.99 | 193.75 | 204.51 |
| 20 | 215.28 | 226.04 | 236.81 | 247.57 | 258.33 | 269.10 | 279.86 | 290.62 | 301.39 | 312.15 |
| 30 | 322.92 | 333.68 | 344.44 | 355.21 | 365.97 | 376.74 | 387.50 | 398.26 | 409.03 | 419.79 |
| 40 | 430.56 | 441.32 | 452.08 | 462.85 | 473.61 | 484.37 | 495.14 | 505.90 | 516.67 | 527.43 |
| 50 | 538.19 | 548.96 | 559.72 | 570.49 | 581.25 | 592.01 | 602.78 | 613.54 | 624.30 | 635.07 |
| 60 | 645.83 | 656.60 | 667.36 | 678.12 | 688.89 | 699.65 | 710.42 | 721.18 | 731.94 | 742.71 |
| 70 | 753.47 | 764.24 | 775.00 | 785.76 | 798.53 | 807.29 | 818.05 | 828.82 | 839.58 | 850.35 |
| 80 | 861.11 | 871.87 | 882.64 | 893.40 | 904.17 | 914.93 | 925.67 | 936.46 | 947.22 | 957.98 |
| 90 | 968.75 | 979.51 | 990.28 | 1001.04 | 1011.81 | 1022.57 | 1033.33 | 1044.10 | 1054.86 | 1065.62 |

To convert from other metric units to square feet move the decimal point in the table as follows:
Square dekameter, square hectometer, and square kilometer - 2, 4, and 6 places to the right.
Square decimeter, square centimeter, and square millimeter - 2, 4, and 6 places to the left.



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## CONVERSION TABLE

### Square Inches to Square Centimeters

By definition: 1 square inch = $10^8/3937^2$ or 6.451626 square centimeters.

| SQUARE INCHES | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 6.452 | 12.903 | 19.355 | 25.806 | 32.258 | 38.710 | 45.161 | 51.613 | 58.065 |
| 10 | 64.516 | 70.968 | 77.420 | 83.871 | 90.323 | 96.774 | 103.226 | 109.678 | 116.129 | 122.581 |
| 20 | 129.033 | 135.484 | 141.936 | 148.387 | 154.839 | 161.291 | 167.742 | 174.194 | 180.646 | 187.097 |
| 30 | 193.549 | 200.000 | 206.452 | 212.904 | 219.355 | 225.807 | 232.259 | 238.710 | 245.162 | 251.613 |
| 40 | 258.065 | 264.517 | 270.968 | 277.420 | 283.872 | 290.323 | 296.775 | 303.226 | 309.678 | 316.130 |
| 50 | 322.581 | 329.033 | 335.485 | 341.936 | 348.388 | 354.839 | 361.291 | 367.743 | 374.194 | 380.646 |
| 60 | 387.098 | 393.549 | 400.001 | 406.452 | 412.904 | 419.356 | 425.807 | 432.259 | 438.711 | 445.162 |
| 70 | 451.614 | 458.065 | 464.517 | 470.969 | 477.420 | 483.872 | 490.324 | 496.775 | 503.227 | 509.678 |
| 80 | 516.130 | 522.582 | 529.033 | 535.485 | 541.937 | 548.388 | 554.840 | 561.291 | 567.743 | 574.195 |
| 90 | 580.646 | 587.098 | 593.550 | 600.001 | 606.453 | 612.904 | 619.356 | 625.808 | 632.259 | 638.711 |

To convert from square inches to other metric units move the decimal point in the table as follows:
Sq millimeters - 2 places to the right.
Square decimeters, square meters, etc. - 2, 4, etc., places to the left.



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## CONVERSION TABLE

### Square Centimeters to Square Inches

By definition: 1 square centimeter = $3937^2/10^8$ or 0.155000 square inch.

| SQUARE CM | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.1550 | 0.3100 | 0.4650 | 0.6200 | 0.7750 | 0.9300 | 1.0850 | 1.2400 | 1.3950 |
| 10 | 1.5500 | 1.7050 | 1.8600 | 2.0150 | 2.1700 | 2.3250 | 2.4800 | 2.6350 | 2.7900 | 2.9450 |
| 20 | 3.1000 | 3.2550 | 3.4100 | 3.5650 | 3.7200 | 3.8750 | 4.0300 | 4.1850 | 4.3400 | 4.4950 |
| 30 | 4.6500 | 4.8050 | 4.9600 | 5.1150 | 5.2700 | 5.4250 | 5.5800 | 5.7350 | 5.8900 | 6.0450 |
| 40 | 6.2000 | 6.3550 | 6.5100 | 6.6650 | 6.8200 | 6.9750 | 7.1300 | 7.2850 | 7.4400 | 7.5950 |
| 50 | 7.7500 | 7.9050 | 8.0600 | 8.2150 | 8.3700 | 8.5250 | 8.6800 | 8.8350 | 8.9900 | 9.1450 |
| 60 | 9.3000 | 9.4550 | 9.6100 | 9.7650 | 9.9200 | 10.0750 | 10.2300 | 10.3850 | 10.5400 | 10.6950 |
| 70 | 10.8500 | 11.0050 | 11.1600 | 11.3150 | 11.4700 | 11.6250 | 11.7800 | 11.9350 | 12.0900 | 12.2450 |
| 80 | 12.4000 | 12.5550 | 12.7100 | 12.8650 | 13.0200 | 13.1750 | 13.3300 | 13.4850 | 13.6400 | 13.7950 |
| 90 | 13.9500 | 14.1050 | 14.2600 | 14.4150 | 14.5700 | 14.7250 | 14.8800 | 15.0350 | 15.1900 | 15.3450 |

To convert from other metric units to square inches move the decimal point in the table as follows:
Square decimeters, square meters, etc. - 2, 4, etc., places to the right.
Square millimeters - 2 places to the left.

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## CONVERSION TABLE

### Gallons to Liters

By definition: 1 gallon = $231 \times 10^9/3937^3$ or 3.785434 liters.

| GAL-LONS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 3.785 | 7.571 | 11.356 | 15.142 | 18.927 | 22.713 | 26.498 | 30.284 | 34.069 |
| 10 | 37.854 | 41.640 | 45.425 | 49.211 | 52.996 | 56.782 | 60.567 | 64.352 | 68.138 | 71.923 |
| 20 | 75.709 | 79.494 | 83.280 | 87.065 | 90.850 | 94.636 | 98.421 | 102.207 | 105.992 | 109.778 |
| 30 | 113.563 | 117.348 | 121.134 | 124.919 | 128.705 | 132.490 | 136.276 | 140.061 | 143.846 | 147.632 |
| 40 | 151.417 | 155.203 | 158.988 | 162.774 | 166.559 | 170.345 | 174.130 | 177.915 | 181.701 | 185.486 |
| 50 | 189.272 | 193.075 | 196.843 | 200.628 | 204.413 | 208.199 | 211.984 | 215.770 | 219.555 | 223.341 |
| 60 | 227.126 | 230.911 | 234.697 | 238.482 | 242.268 | 246.053 | 249.839 | 253.624 | 257.410 | 261.195 |
| 70 | 264.980 | 268.766 | 272.551 | 276.337 | 208.122 | 283.908 | 287.693 | 291.478 | 295.264 | 299.049 |
| 80 | 302.835 | 306.620 | 310.406 | 314.191 | 317.976 | 321.762 | 325.547 | 329.333 | 333.118 | 336.904 |
| 90 | 340.689 | 344.474 | 348.260 | 352.045 | 355.831 | 359.616 | 363.402 | 367.187 | 370.973 | 374.758 |

To convert from gallons to other metric units move the decimal point in the table as follows:
deciliter, centiliter, and milliliter - 1, 2, and 3 places to the right.
dekaliter, hectoliter, and kiloliter - 1, 2, and 3 places to the left.
cubic centimeter and cubic millimeter - 3 and 6 places to the right.
cubic meter, cubic dekameter, etc., - 3, 6, etc., places to the left.

1 liter = 1 cubic decimeter.

## CONVERSION TABLE

### Liters to Gallons

By definition: 1 liter = $3937^3/231 \times 10^9$ or 0.264170 gallon.

| LITERS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.2642 | 0.5283 | 0.7925 | 1.0567 | 1.3209 | 1.5850 | 1.8492 | 2.1134 | 2.3775 |
| 10 | 2.6417 | 2.9059 | 3.1700 | 3.4342 | 3.6984 | 3.9626 | 4.2267 | 4.4909 | 4.7551 | 5.0192 |
| 20 | 5.2834 | 5.5476 | 5.8117 | 6.0759 | 6.3401 | 6.6043 | 6.8684 | 7.1326 | 7.3968 | 7.6609 |
| 30 | 7.9251 | 8.1893 | 8.4534 | 8.7176 | 8.9818 | 9.2460 | 9.5101 | 9.7743 | 10.0385 | 10.3026 |
| 40 | 10.5668 | 10.8310 | 11.0951 | 11.3593 | 11.6235 | 11.8877 | 12.1518 | 12.4160 | 12.6802 | 12.9443 |
| 50 | 13.2085 | 13.4727 | 13.7368 | 14.0010 | 14.2652 | 14.5294 | 14.7935 | 15.0576 | 15.3219 | 15.5860 |
| 60 | 15.8502 | 16.1144 | 16.3785 | 16.6427 | 16.9069 | 17.1711 | 17.4352 | 17.6994 | 17.9636 | 18.2277 |
| 70 | 18.4919 | 18.7561 | 19.0202 | 19.2844 | 19.5486 | 19.8128 | 20.0769 | 20.3411 | 20.6053 | 20.8694 |
| 80 | 21.1336 | 21.3978 | 21.6619 | 21.9261 | 22.1903 | 22.4545 | 22.7186 | 22.9828 | 23.2470 | 23.5111 |
| 90 | 23.7753 | 24.0395 | 24.3036 | 24.5678 | 24.8320 | 25.0962 | 25.3603 | 25.6245 | 25.8887 | 26.1528 |

To convert from other metric units to gallons move the decimal point in the table as follows:
Dekaliter, hectoliter, and kiloliter - 1, 2, and 3 places to the right.
Deciliter, centiliter, and milliter - 1, 2, and 3 places to the left.
Cubic meter, cubic dekameter, etc. - 3, 6, etc., places to the right.
Cubic centimeter and cubic millimeter - 3 and 6 places to the left.



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## CONVERSION TABLE

### Cubic Feet to Cubic Meters

By definition: 1 cubic foot = $1200^3/3937^3$ or 0.0283170 cubic meter.

| CUBIC FEET | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.0283 | 0.0566 | 0.0850 | 0.1133 | 0.1416 | 0.1699 | 0.1982 | 0.2265 | 0.2549 |
| 10 | 0.2832 | 0.3115 | 0.3398 | 0.3681 | 0.3964 | 0.4248 | 0.4531 | 0.4813 | 0.5097 | 0.5380 |
| 20 | 0.5663 | 0.5947 | 0.6230 | 0.6513 | 0.6796 | 0.7079 | 0.7362 | 0.7646 | 0.7929 | 0.8212 |
| 30 | 0.8495 | 0.8778 | 0.9061 | 0.9345 | 0.9628 | 0.9911 | 1.0194 | 1.0477 | 1.0760 | 1.1044 |
| 40 | 1.1327 | 1.1610 | 1.1893 | 1.2176 | 1.2459 | 1.2743 | 1.3026 | 1.3309 | 1.3592 | 1.3875 |
| 50 | 1.4159 | 1.4442 | 1.4725 | 1.5008 | 1.6291 | 1.5574 | 1.5858 | 1.6141 | 1.6424 | 1.6707 |
| 60 | 1.6990 | 1.7273 | 1.7557 | 1.7840 | 1.8123 | 1.8406 | 1.8689 | 1.8972 | 1.9256 | 1.9539 |
| 70 | 1.9822 | 2.0105 | 2.0388 | 2.0671 | 2.0955 | 2.1238 | 2.1521 | 2.1804 | 2.2087 | 2.2370 |
| 80 | 2.2654 | 2.2937 | 2.3220 | 2.3503 | 2.3786 | 2.4069 | 2.4353 | 2.4636 | 2.4919 | 2.5202 |
| 90 | 2.5485 | 2.5768 | 2.6052 | 2.6335 | 2.6618 | 2.6901 | 2.7184 | 2.7468 | 2.7751 | 2.8034 |

To convert from cubic feet to other metric units move the decimal point in the table as follows:
cubic decimeter, cubic centimeter, and cubic millimeter - 3, 6, and 9 places to the right.
cubic dekameter, cubic hectometer, and cubic kilometer - 3, 6, and 9 places to the left.



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## CONVERSION TABLE

### Cubic Meters to Cubic Feet

By definition: 1 cubic meter = $3937^3/1200^3$ or 35.314455 cubic feet.

| CUBIC METERS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 35.31 | 70.63 | 105.94 | 141.26 | 176.57 | 211.89 | 247.40 | 282.52 | 317.83 |
| 10 | 353.14 | 388.46 | 423.77 | 459.09 | 494.40 | 529.72 | 565.03 | 600.35 | 635.66 | 670.97 |
| 20 | 706.29 | 741.60 | 776.92 | 812.23 | 847.55 | 882.86 | 918.18 | 953.49 | 988.80 | 1024.12 |
| 30 | 1059.43 | 1094.75 | 1130.06 | 1165.38 | 1200.69 | 1236.01 | 1271.32 | 1306.63 | 1341.95 | 1377.26 |
| 40 | 1412.58 | 1447.89 | 1483.21 | 1518.52 | 1553.84 | 1589.15 | 1624.46 | 1659.78 | 1695.09 | 1730.41 |
| 50 | 1765.72 | 1801.04 | 1836.35 | 1871.67 | 1906.98 | 1942.30 | 1977.61 | 2012.92 | 2048.24 | 2083.55 |
| 60 | 2118.87 | 2154.18 | 2189.50 | 2224.81 | 2260.13 | 2295.44 | 2330.75 | 2366.07 | 2401.38 | 2436.70 |
| 70 | 2472.01 | 2507.33 | 2542.64 | 2577.96 | 2613.27 | 2648.58 | 2683.90 | 2719.21 | 2754.53 | 2789.84 |
| 80 | 2825.16 | 2860.47 | 2895.79 | 2931.10 | 2966.41 | 3001.73 | 3037.04 | 3072.36 | 3107.67 | 3142.99 |
| 90 | 3178.30 | 3213.62 | 3248.93 | 3284.24 | 3319.56 | 3354.87 | 3390.19 | 3425.50 | 3460.82 | 3496.13 |

To convert from other metric units to cubic feet move the decimal point in the table as follows:
Cubic dekameter, cubic hectometer, and cubic kilometer - 3, 6, and 9 places to the right.
Cubic decimeter, cubic centimeter, and cubic millimeter - 3, 6, and 9 places to the left.



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## CONVERSION TABLE

### Inches to Sun

By definition: 1 inch = 19800/23622 or 0.838202 sun.

| INCHES | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.8382 | 1.6764 | 2.5146 | 3.3528 | 4.1910 | 5.0292 | 5.8674 | 6.7056 | 7.5438 |
| 10 | 8.3820 | 9.2202 | 10.0584 | 10.8966 | 11.7348 | 12.5730 | 13.4112 | 14.2494 | 15.0876 | 15.9258 |
| 20 | 16.7640 | 17.6022 | 18.4404 | 19.2786 | 20.1168 | 20.9551 | 21.7933 | 22.6315 | 23.4697 | 24.3079 |
| 30 | 25.1461 | 25.9843 | 26.8225 | 27.6607 | 28.4989 | 29.3371 | 30.1753 | 31.0135 | 31.8517 | 32.6899 |
| 40 | 33.5281 | 34.3663 | 35.2045 | 36.0427 | 36.8809 | 37.7191 | 38.5573 | 39.3955 | 40.2337 | 41.0719 |
| 50 | 41.9101 | 42.7483 | 43.5865 | 44.4247 | 45.2629 | 46.1011 | 46.9393 | 47.7775 | 48.6157 | 49.4539 |
| 60 | 50.2921 | 51.1303 | 51.9685 | 52.8067 | 53.6449 | 54.4831 | 55.3213 | 56.1595 | 56.9977 | 57.8359 |
| 70 | 58.6741 | 59.5123 | 60.3505 | 61.1887 | 62.0269 | 62.8652 | 63.7034 | 64.5416 | 65.3798 | 66.2180 |
| 80 | 67.0562 | 67.8944 | 68.7326 | 69.5708 | 70.4090 | 71.2472 | 72.0854 | 72.9236 | 73.7618 | 74.6000 |
| 90 | 75.4382 | 76.2764 | 77.1146 | 77.9528 | 78.7910 | 79.6292 | 80.4674 | 81.3056 | 82.1438 | 82.9820 |

To convert from inches to other Japanese units move the decimal point in the table as follows:
Bu and rin - 1 and 2 places to the right.
Shaku and jō - 1 and 2 places to the left.



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## CONVERSION TABLE
### Sun to Inches

By definition: 1 sun = 23622/19800 or 1.193030 inches.

| SUN | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 1.193 | 2.386 | 3.579 | 4.772 | 5.965 | 7.158 | 8.351 | 9.544 | 10.737 |
| 10 | 11.930 | 13.123 | 14.316 | 15.509 | 16.702 | 17.895 | 19.088 | 20.282 | 21.475 | 22.668 |
| 20 | 23.861 | 25.054 | 26.247 | 27.440 | 28.633 | 29.826 | 31.019 | 32.212 | 33.405 | 34.598 |
| 30 | 35.791 | 36.984 | 38.177 | 39.370 | 40.563 | 41.756 | 42.949 | 44.142 | 45.335 | 46.528 |
| 40 | 47.721 | 48.914 | 50.107 | 51.300 | 52.493 | 53.686 | 54.879 | 56.072 | 57.265 | 58.485 |
| 50 | 59.652 | 60.845 | 62.038 | 63.231 | 64.424 | 65.617 | 66.810 | 68.003 | 69.196 | 70.389 |
| 60 | 71.582 | 72.775 | 73.968 | 75.161 | 76.354 | 77.547 | 78.540 | 79.933 | 81.126 | 82.319 |
| 70 | 83.512 | 84.705 | 85.898 | 87.091 | 88.284 | 89.477 | 90.670 | 91.863 | 93.056 | 94.249 |
| 80 | 95.442 | 96.635 | 97.828 | 99.021 | 100.215 | 101.408 | 102.601 | 103.794 | 104.987 | 106.180 |
| 90 | 107.373 | 108.566 | 109.759 | 110.952 | 112.145 | 113.338 | 114.531 | 115.724 | 116.917 | 118.110 |

To convert from other Japanese units to inches move the decimal point in the table as follows:
Shaku and jō - 1 and 2 places to the right.
Bu and rin - 1 and 2 places to the left.



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## CONVERSION TABLE

### Tsubo to Square (heihō) Shaku

By definition: 1 tsubo = 36 square (heihō) shaku

| TSUBO | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 36 | 72 | 108 | 144 | 180 | 216 | 252 | 288 | 324 |
| 10 | 360 | 396 | 432 | 468 | 504 | 540 | 576 | 612 | 648 | 684 |
| 20 | 720 | 756 | 792 | 828 | 864 | 900 | 936 | 972 | 1008 | 1044 |
| 30 | 1080 | 1116 | 1152 | 1188 | 1224 | 1260 | 1296 | 1332 | 1368 | 1404 |
| 40 | 1440 | 1476 | 1512 | 1548 | 1584 | 1620 | 1656 | 1692 | 1728 | 1764 |
| 50 | 1800 | 1836 | 1872 | 1908 | 1944 | 1980 | 2016 | 2052 | 2088 | 2124 |
| 60 | 2160 | 2196 | 2232 | 2268 | 2304 | 2340 | 2376 | 2412 | 2448 | 2484 |
| 70 | 2520 | 2556 | 2592 | 2628 | 2664 | 2700 | 2736 | 2772 | 2808 | 2844 |
| 80 | 2880 | 2916 | 2952 | 2988 | 3024 | 3060 | 3096 | 3132 | 3168 | 3204 |
| 90 | 3240 | 3276 | 3312 | 3348 | 3384 | 3420 | 3456 | 3492 | 3528 | 3564 |

To convert from other Japanese units to square (heihō) shaku move the decimal point in the table as follows: Gō and shaku (area measure only) - 1 and 2 places to the left.



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DECLASSIFIED E.O. 12065 SECTION 3-402/NNDC NO. 77501/3

## CONVERSION TABLE

### Square (heihō) Shaku to Tsubo

By definition: 1 square (heihō) shaku = 1/36 or 0.0277778 tsubo.

| SQUARE SHAKU | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0.0278 | 0.0556 | 0.0833 | 0.1111 | 0.1389 | 0.1667 | 0.1944 | 0.2222 | 0.2500 |
| 10 | 0.2778 | 0.3056 | 0.3333 | 0.3611 | 0.3889 | 0.4167 | 0.4444 | 0.4722 | 0.5000 | 0.5278 |
| 20 | 0.5556 | 0.5833 | 0.6111 | 0.6389 | 0.6667 | 0.6944 | 0.7222 | 0.7500 | 0.7778 | 0.8056 |
| 30 | 0.8333 | 0.8611 | 0.8889 | 0.9167 | 0.9444 | 0.9722 | 1.0000 | 1.0278 | 1.0556 | 1.0833 |
| 40 | 1.1111 | 1.1389 | 1.1667 | 1.1944 | 1.2222 | 1.2500 | 1.2778 | 1.3056 | 1.3333 | 1.3611 |
| 50 | 1.3889 | 1.4167 | 1.4444 | 1.4722 | 1.5000 | 1.5278 | 1.5556 | 1.5833 | 1.6111 | 1.6389 |
| 60 | 1.6667 | 1.6944 | 1.7222 | 1.7500 | 1.7778 | 1.8056 | 1.8333 | 1.8611 | 1.8889 | 1.9167 |
| 70 | 1.9444 | 1.9722 | 2.0000 | 2.0278 | 2.0556 | 2.0833 | 2.1111 | 2.1389 | 2.1667 | 2.1944 |
| 80 | 2.2222 | 2.2500 | 2.2778 | 2.3056 | 2.3333 | 2.3611 | 2.3889 | 2.4167 | 2.4444 | 2.4722 |
| 90 | 2.5000 | 2.5278 | 2.5556 | 2.5833 | 2.6111 | 2.6389 | 2.6667 | 2.6944 | 2.7222 | 2.7500 |

To convert from square (heihō) shaku to other Japanese units move the decimal point in the table as follows:
Go and shaku (area measure only - 1 and 2 places to the right.

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95TH HEADQUARTERS AND HEADQUARTERS DETACHMENT
MILITARY GOVERNMENT GROUP
Kurume, Kyushu, Japan

PROCUREMENT INSTRUCTION) APO 929
: 14 February 1946
NUMBER 1)

1. Ref Radio KFX 4295 from CG I Corps, all procurement duties were taken over by Military Government in this area, effective 8 Feb 1946.

2. Each Military Government Company will establish a procurement section to handle procurements within the Kens under their control.

a. Procurement demands will be numbered consecutively beginning with No. 1 for each company, and should conform generally with 6th Army procurement procedures. Numbers will be assigned the demand in this manner: QM-29-PD-1-46. The first group of letters represents the type material to be procured. The second group represents the Company processing the demand. The third group is the Procurement Demand. The fourth group is the number assigned the demand document. The fifth group represents the year.

3. As directed by Hq. I Corps, a temporary guide to be followed in all procurement matters will be the Sixth Army Procurement Manual, dated 1 Dec 45. Eighth Army Procurement Manual, to supercede the Sixth Army Manual, will become effective upon receipt.

a. The "Procurement Agency" referred to in the Sixth Army Manual will be considered the Military Government Company.

b. Documents, including GPA Reports, for the General Procurement agent, will be addressed to Hq, ASCOM-C, APO 404 thru channels.

c. The Letter of Release, form PS-15, will be rewritten so as to contain only the basic communication as written in the present Sixth Army PS-15 form. The Letter of Release will be addressed to the Procurement Officer, Hq, I Corps, APO 301, thru channels.

4. Higher headquarters has placed, and will continue to place, additional items of procurement in a restricted category. Accordingly, Sections 7 and 8 of the Sixth Army Manual will be amended so as to add to or delete from lists of items referred to in these two sections.

BY ORDER OF LIEUTENANT COLONEL YOUNG:

Harold K. Brown
HAROLD K. BROWN
Captain, Infantry
Adjutant

Incl: Extracts of 6th Army Procurement Manual.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

HEADQUARTERS
SECOND MARINES, SECOND MARINE DIVISION
FMF, IN THE FIELD.

9 February, 1946.

From: Procurement Officer, 2nd Marines
To : Capt. Pidgeon, 3rd Bn. Military Gov't Officer
Capt. Goldstien, 2nd Bn. Military Gov't Officer
Capt. Friedman 1st Bn. Military Gov't Officer
Lt. Smith 2nd Bn. Procurement Officer
Lt. Morse 3rd Bn. Procurement Officer
Lt. Sellick 1st Bn. Procurement Officer

Subject: Procurement, transfer of to Military Gov't

1. The following message was received by the Procurement Section, Second Marines, from HDQ, 2nd Marine Division:

"All procurement control and responsibility will be taken over by Military Government in Second Mar.Div. area eff 8 Feb., 46 x Each MilGovt Company now establishing procurement sections to handle procurement within Kens controlled by them x Tactical units will contact MilGovt of Prdfecture in which tactical unit is located x MilGovt Company and respective Ken Area as follows:

29 MilGovt Company Nagasaki and Saga x 37 MilGovt Company at Fukuoka and Yamaguchi x 92 MilGovt Company Kagoshima and Miyazaki x 93 MilGovt Company Kumamoto and Oita x Procurement Demands will be numbered consecutively beginning with number one for each company to conform with procedure now in effect x Numbers will be shown as follows x QM-29-PD-1-46 x First group of letters representing type of material to be procured x Second group representing number of MilGovt Company x Third group is procurement demand x Fourth group representing the number of demand x Fifth group representing the year x Further instructions will follow"

2. At present, no arrangements have been made with the 92nd and 93rd Military Government groups for the transfer of this function. It is suggested that unit procurement officers consult with local Mil.Gov't groups and begin process of familiarizing Mil. Govt. officers with procurement forms.

3. Further information will be relayed by this office as it is received

A. J. Vidich
By direction

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AK/hc

HEADQUARTERS
93RD HEADQUARTERS & HEADQUARTERS DETACHMENT
MILITARY GOVERNMENT GROUP, KUMAMOTO, KYUSHU, JAPAN

Serial No: 1583 8 February, 1946.

Subject: General Order No. 15.
To : Commanding Officer, 93rd Headquarters and Headquarters Detachment, Military Government Group, Oita Detachment, Oita, Japan.

1. The enclosed copy of Division General Order No. 15, Second Marine Division, FMF, In the Field, dated 1 February, 1946, is forwarded for your information and guidance.

R. S. Link
R. S. LINK
LT COL AC
COMMANDING

Inclosure:
Div. Gen'l. Order No.15, 2nd Mar. Div., FMF, dtd 1Feb46.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

AK/hc

HEADQUARTERS
93RD HEADQUARTERS & HEADQUARTERS DETACHMENT
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DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

Dita

RLS/hes

SECOND MARINE DIVISION, FMF,
IN THE FIELD.

RESTRICTED

1 February, 1946

DIVISION GENERAL ORDER)
: Controlled Critical Items.
NUMBER.....15)

1. In order that the procurement of Japanese facilities by the occupying forces will not operate to cause starvation, widespread disease, or acute physical distress nor to cause the dislocation of the Japanese economy, the procurement of certain facilities are placed in a restricted category.

2. From time to time higher authority assures the Japanese government and occasionally foreign nationals that certain properties will not be taken over by the occupying forces. Notification of such commitments will be distributed to all procurement agencies.

3. Pin pointed maps and indexed files should be used to reflect the location and type of such properties in order that the procurement is not unwittingly affected.

4. The following items will not be procured without obtaining prior authorization from this headquarters. Additional lists will be included to this order as issued:

(1) Religious institutions, national shrines, temples, buildings, areas of worship.

(2) Property, real or personal, occupied or owned by members of the royal family and foreign national individuals or corporations.

(3) Educational institutions such as schools, colleges, universities, but not including commercial, trade, military and naval schools.

(4) Medical supplies and equipment.

(5) Dental supplies and equipment.

(6) Rice, milk (fresh or processed), fish, salt, sugar and all foodstuffs not previously listed.

(7) Petroleum products, gasoline, lubricating oils and greases, etc.

(8) General purpose vehicles including passenger vehicles, accessories, spare parts, tools, etc.

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(9) Tires and tubes.

(10) Fire engines and fire-fighting equipment.

(11) House-type furniture not in dealers stocks.

(12) Radio receivers (broadcast and communications).

(13) Radio transmitter equipment.

(14) Radio transmitting and telephone repeating tubes.

(15) Telephones.

(16) Telephone switchboards (automatic and manual).

(17) Carrier equipment.

(18) Repeater equipment.

(19) Telephone cable (loop, toll and carrier).

(20) Blankets, clothing or textiles commonly used in manufacture of clothing.

(21) Objects of art, museum pieces and heirlooms.

(22) Items, the value of which is greater than that normally expended for similar purposes such as high-grade china for messes, expensive carpeting for quarters, etc.

(23) Charcoal.

(24) Emergency cash purchases in any repeat any amount.

(25) Hospitals, civilian, military or naval.

(26) Dispensaries, clinics and medical laboratories.

(27) Government installations in use, such as office buildings, shops, factories, etc.

(28) Factories and plants producing foodstuffs, clothing, medical supplies, and other essential commodities for civilian population needs.

(29) Supply and distribution facilities for food,

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# CORRECTION

THIS DOCUMENT

HAS BEEN REPHOTOGRAPHED

TO ASSURE LEGIBILITY

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