## Analog to Digital Converter (9A)

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## Make a binary string

$$
X_{Q}=R\left(D_{1} 2^{-1}+D_{2} 2^{-2}+\cdots+D_{N} 2^{-N}\right)
$$

$$
\boldsymbol{D}=[0,0, \cdots, 0]
$$

$$
\boldsymbol{D}=[0,0, \cdots, 1]
$$

$$
\boldsymbol{D}=\left[\begin{array}{lll}
1, & 0, & \cdots, 0
\end{array}\right]
$$

$$
\boldsymbol{D}=[1,1, \cdots, 1]
$$

## ADC (9A)

## References

[1] http://en.wikipedia.org/
[2] http://planetmath.org/
[3] M.L. Boas, "Mathematical Methods in the Physical Sciences"

