The AM of the series 1, 2, 4, 8, 16, ..., 2^n is

(a) $\frac{2^n - 1}{n}$

(b) $\frac{2^{n+1} - 1}{n+1}$

(c) $\frac{2^n + 1}{n}$

(d) $\frac{2^n - 1}{n+1}$

(d) Let $x_1, x_2, \ldots, x_n$ be n numbers. Then $\bar{X} = \frac{1}{n}\sum_{i=1}^{n} x_i$.

If each number is divided by 3, then the new mean $\bar{Y}$ is given by

$$\bar{Y} = \frac{1}{n}\sum_{i=1}^{n}\left(\frac{x_i}{3}\right) = \frac{1}{3}\left(\frac{1}{n}\sum_{i=1}^{n} x_i\right) = \frac{\bar{X}}{3}$$