

SEQUENCES AND SERIES

To find $T_n = a + (n-1)d$ (A.P)

Calc $\Rightarrow (a+d) = \dots \dots \dots$ $n+1$

Eg: 2, 5, 8, ... T_{21}

$2+3 = \dots \dots \dots$ 23

$T_{21} = 62$

Sum of A.P series

Eg: $S_3 = T_1 + T_2 + T_3$

$S_n = \frac{n}{2} [2a + (n-1)d]$

$S_n = \frac{n}{2} (a + l)$

Calc $\Rightarrow a+d = \dots \dots \dots$ $n+1$ GT $\oplus a$

Eg: 2, 4, 6, 8, ... S_{10}

$S_{10} = 2+2 = \dots \dots \dots$ 11

$= 110$

Eg: 2, -4, -6, -8, ... S_{10}

$S_{10} = -2-2 = \dots \dots \dots$ 11 GT -2

A.M

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$\frac{a+b}{2}$

Q: 55 & 43

$\frac{55+43}{2}$

$= 49$

Insert

$\frac{b-a}{n+1}$

Q: 8 terms b/w 2 & 8

$\frac{8-2}{2+1} = \frac{6}{3} = 2$

1st term = 2

$T_2 = 2+2 = 4$

$T_3 = 4+2 = 6$

$T_n = a$