

ARITHMETIC PROGRESSIONS

ACTIVITY SHEET-6

STUDENTS NAME:

Sum of first +ve even integers

$$\begin{aligned} \text{Ex: } & 2+4+6+8+10 \\ & =2(1+2+3+4+5) \\ & =2 \times \frac{5 \times 6}{2} \\ & = 5 \times 6 = 30 \end{aligned}$$

Sum of first +ve 'n' number of even integers = $n(n+1)$

- Ex: 1) find the sum of $2+4+6+8+10+12+14+16$ (here n is 8)
2) find the sum of $2+4+6+8+10+12+14+16+18+20$ (here n is 10)
3) find the sum of $2+4+6+8+10+12+14+16+18+20+22+24+26$ (here n is 13)
4) find the sum of $2+4+6+8+10+12+14+16+18+20+22+24+26+28+30$ (here n is 15)
5) Find the sum of first +ve even integers upto 30 terms (here n is 30)

Sum of first +ve odd integers

$$\begin{aligned} 1+3 &= 4 = 2^2 \\ 1+3+5 &= 9 = 3^2 \\ 1+3+5+7+9+11 &= 36 = 6^2 \end{aligned}$$

Sum of first +ve 'n' number of odd integers = n^2

- Ex: 1) find the sum of $1+3+5+7+9+11+13+15$ (here n is 8)
2) find the sum of $1+3+5+7+9+11+13+15+17+19$ (here n is 10)
3) find the sum of $1+3+5+7+9+11+13+15+17+19+21+23+25$ (here n is 13)
4) Find the sum of first +ve odd integers upto 20 terms (here n is 20)
5) Find the sum of first +ve odd integers upto 30 terms (here n is 30)

