

③ 3 20 78 334 1696 ?

A) 8420

B) 9886

C) 10206

D) 1150

Ans:- The sequence is an ~~arithmetic~~ arithmetic sequence [14]

$$a_n = n a_{n-1} + [14 + 4(n-2)]$$

$$a_2 = 2 \times 3 + [14 + 4(2-2)] = 20$$

$$a_3 = 3 \times 20 + [14 + 4(3-2)] = 60 + (14+4) = 60 + 18 = 78$$

$$a_4 = 4 \times 78 + [14 + 4(4-2)] = 312 + (14+8) = 312 + 22 = 334$$

$$a_5 = 5 \times 334 + [14 + 4(5-2)] = 1670 + 26 = 1696$$

$$a_6 = 6 \times 1696 + [14 + 4(6-2)] = 10176 + 30 = 10206$$

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Ans:- The sequence is ~~an~~ $a_n = a_{n-1} + [14 + 4(n-2)]$

$$a_1 = 3$$

$$a_2 = a_1 + [14 + 4 \cdot (2-2)] = 3 + 14 = 17$$

$$a_3 = a_2 + [14 + 4 \cdot (3-2)] = 17 + 18 = 35$$

$$a_4 = a_3 + [14 + 4 \cdot (4-2)] = 35 + 22 = 57$$

$$a_5 = a_4 + [14 + 4 \cdot (5-2)] = 57 + 26 = 83$$

$$a_6 = a_5 + [14 + 4 \cdot (6-2)] = 83 + 30 = 113$$