

Assignment 1

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Problem

If $(k-3), (2k+1), (4k+3)$ are three consecutive terms of A.P., find the value of k

Solution

let $a = k-3$, $b = 2k+1$, $c = 4k+3$ are three consecutive terms of A.P.
common difference between consecutive terms of A.P. is same

$$(b - a) = (c - b) \quad (1)$$

$$(2k + 1) - (k - 3) = (4k + 3) - (2k + 1) \quad (2)$$

$$2k + 1 - k + 3 = 4k + 3 - 2k - 1 \quad (3)$$

$$k + 4 = 2k + 2 \quad (4)$$

$$-k = -2 \quad (5)$$

$$k = 2 \quad (6)$$

Answer

k is equal to 2