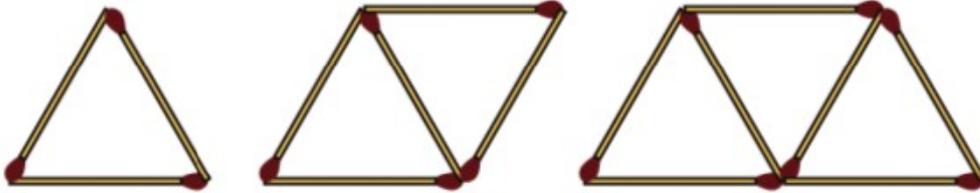


ONLINE MATHS CLASS - X - 05 (28 / 06 /2021)

1. ARITHMETIC SEQUENCE - CLASS 3

WORKSHEET - ANSWERS

1. Let's make figures using matchsticks as shown in the figure.



a) If we continue like this , how many matchsticks will be there in the fourth figure ?

b) If we continue this process , write the sequence of number of matchsticks in each figure ?

c) Is this sequence an arithmetic sequence ? Give reasons .

Answer

a) 9

b) 3, 5, 7, 9, . . .

c) Here the sequence start with 3 and adding 2 repeatedly . So it is an arithmetic sequence .

2. Consider sequence of circles with radii 1 cm , 2 cm, 3cm , 4 cm , . . . (radii change in order)

a) Write the sequence of perimeters of the circles .

b) Is this sequence an arithmetic sequence ? Give reasons .

Answer

a) **Perimeter of the circle** = $2\pi \times \text{radius}$

$$2\pi \times 1 , 2\pi \times 2 , 2\pi \times 3 , . . . = 2\pi , 4\pi , 6\pi , . . .$$

b) Here the sequence start with 2π and adding 2π repeatedly . So it is an arithmetic sequence .

3. a) Write the sequence of natural numbers which leave remainder 1 on division by 2
b) Is this sequence an arithmetic sequence? Give reasons.

Answer

a) $1, 3, 5, \dots$

b) Here the sequence starts with 1 and adding 2 repeatedly. So it is an arithmetic sequence.

4. a) Write the sequence got by multiplying natural numbers by 5 and then add 3.
b) Is this sequence an arithmetic sequence? Give reasons.

Answer

a) $5 \times 1 + 3, 5 \times 2 + 3, 5 \times 3 + 3, 5 \times 4 + 3, \dots$
 $= 5 + 3, 10 + 3, 15 + 3, 20 + 3, \dots$
 $= 8, 13, 18, 23, \dots$

b) Here the sequence starts with 8 and adding 5 repeatedly. So it is an arithmetic sequence.

5. a) Write the sequence got by multiplying natural numbers by 7 and then subtract 4.
b) Is this sequence an arithmetic sequence? Give reasons.

Answer

a) $7 \times 1 - 4, 7 \times 2 - 4, 7 \times 3 - 4, 7 \times 4 - 4, \dots$
 $= 7 - 4, 14 - 4, 21 - 4, 28 - 4, \dots$
 $= 3, 10, 17, 24, \dots$

b) Here the sequence starts with 3 and adding 7 repeatedly. So it is an arithmetic sequence.