

Chapter 5 Class 10 - Arithmetic Progressions - MCQ Worksheet 2 by *teachoo*

Chapter: [Chapter 5 Class 10 Maths - Arithmetic Progressions](#)

Name: _____

School: _____

Roll Number: _____

1. A worker stacks bricks. The bottom layer has 40 bricks, the next has 38 , and so on, up to the top layer with only 2 bricks. To find the total number of bricks, which AP concept is most direct?

(a) The formula for the n th term, $a_n = a + (n - 1)d$.

(b) The sum formula, $S_n = \frac{n}{2}(a + l)$.

(c) Finding the arithmetic mean.

(d) It cannot be determined.

2. The sum of the interior angles of a triangle is 180° , a quadrilateral is 360° , a pentagon is 540° , and so on. This sequence forms an AP. What does the common difference of 180° represent?

- (a) The number of sides.
- (b) The sum of angles of a triangle.
- (c) The increase in the sum of interior angles for each additional side.
- (d) The value of each interior angle.

3. In an AP representing the daily temperature drop during a cold spell, the 5th day's temperature was 10°C and the 10th day's was 5°C . What does this imply about the progression?

- (a) The temperature is rising.
- (b) The temperature is falling by 1°C each day.
- (c) The temperature is falling by 2°C each day.
- (d) The initial temperature was 15°C .

4. A theater's seating is arranged in an AP. The 3rd row has 24 seats and the 8th row has 39 seats. An event is reserved for a class of 31 students. Which is the first row that can accommodate the entire class in a single row?

- (a) 5th row
- (b) 6th row
- (c) 7th row
- (d) 4th row

5. The terms $x - 1$, $x + 3$, $3x - 1$ represent the number of goals scored by a team in three consecutive matches, and they form an AP. The fact that $2(x + 3) = (x - 1) + (3x - 1)$ is a direct application of the concept of:

- (a) Common difference
- (b) Sum of terms
- (c) Arithmetic Mean
- (d) Nth term

6. If the last term of the AP representing a company's annual profit (in lakhs) 2, 5, 8, ... is 59, what does finding the value of 'n' tell you?

- (a) The total profit earned.
- (b) The profit in the next year.
- (c) For how many years the company's profit followed this pattern.
- (d) The average profit.

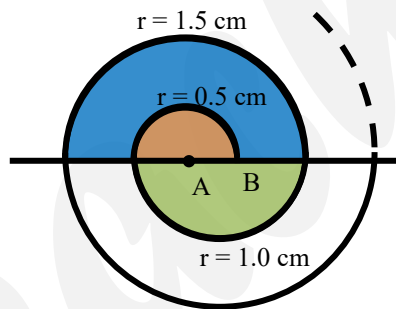
7. The total distance covered by a ball rolling down a slope in 'n' seconds is given by $S_n = 2n^2 + 3n$. How can you find the distance covered by the ball only in the 10th second?

- (a) Calculate S_{10} .
- (b) Calculate $S_{10} - S_9$.
- (c) Substitute $n = 10$ in the formula for a_n .
- (d) There is not enough information.

8. A freelance designer earns ₹15,000 on her first project. She decides to increase her fee by a fixed amount for each subsequent project. If her fee for the 5th project is ₹23,000, the sequence of her fees forms an AP. The first term ' a ' is ₹15,000. What does ' a ' represent?

- (a) The total amount earned.
- (b) The increase in fee per project.
- (c) Her starting fee.
- (d) The number of projects.

9. A spiral is made of successive semicircles with radii 0.5 cm, 1.0 cm, 1.5 cm, ... as shown in the figure. The lengths of the semicircles will form:



- (a) An AP with $d = 0.5$
- (b) An AP with $d = 0.5\pi$
- (c) A sequence that is not an AP.
- (d) An AP with $d = \pi$

10. Why does compound interest not form an AP, while simple interest does?

- (a) Compound interest grows faster.

- (b) In simple interest, the interest earned each year is constant, forming a constant difference.
- (c) In compound interest, the principal changes every year, so the interest added is not constant.
- (d) Both (b) and (c).

Important links

- Answer of this worksheet - <https://www.teachoo.com/25621/5376/MCQ---Worksheet-2/category/Teachoo-Questions---MCQs/>
- Full Chapter with Explanation, Activity, Worksheets and more – <https://www.teachoo.com/subjects/cbse-maths/class-10th/ch5-10th-arithmetic-progressions/>
- Science Class 10– <https://www.teachoo.com/subjects/science/class-10/>
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