



Subject: Mathematics

**Topic: Arithmetic Progressions** 

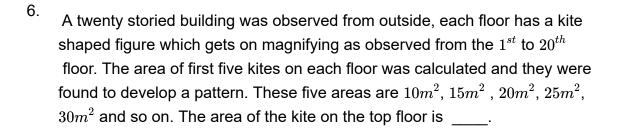
Exam Prep 1 Class: X

- Which of the following sequences form an AP?
  - (i) 2, 4, 8, 16.....
  - (ii) 2, 3, 5, 7, 11......
  - (iii) -1, -1.25, -1.5, -1.75......
  - (iv) 1, -1, -3, -5.....
    - **A.** (i) and (iv)
    - B. (ii) and (iv)
    - C. (iii) and (iv)
    - **D.** (i),(iii) and (iv)
- 2. A player who was playing video game was given 20 coins to begin with the game. To go to the next level, he needs to spend 4 coins and if he succeeds the particular level, he earns 6 coins. Find the number of coins he collects after clearing each level (assuming he clears every level).
  - **A.** 20, 25, 30, 35, 36......
  - **B.** 20, 22, 24, 26, 28.....
  - **C.** 20, 24, 28, 30, 34......
  - **D.** 20, 26, 32, 38, 44.....

## **Practice Challenge - Objective**

- 3. Find the  $20^{th}$  term of the AP 2, 5, 8, 11, 14 ,...
  - **A.** 57
  - **B.** 58
  - **C.** 59
  - **D**. 60
- 4. An arithmetic sequence has  $6^{th}$  term as 52 and  $15^{th}$  term as 142. Find a & d
  - **A.** 2, 10
  - **B.** 10, 2
  - **C.** 2, 20
  - **D.** 20, 2
- 5. Does the sequence of odd numbers form an AP?
  - **A.** Yes, with a common difference of 1.
  - B. No
  - **C.** Yes, with a common difference of 2.
  - **D.** Yes, with a common difference of -1.

## **Practice Challenge - Objective**



- **A.**  $100m^2$
- **B.**  $105m^2$
- **C.**  $110m^2$
- **D.**  $200m^2$
- 7. If the first term of an AP is -8 and the common difference is 4, then the sum of the first ten terms is
  - **A**. 92
  - **B**. 96
  - **C**. 100
  - **D**. 104
- 8. The sides of a right triangle are in an AP. The area and the perimeter of the triangle are numerically equal. Find its perimeter.
  - A. 24 units
  - B. 34 units
  - C. 44 units
  - **D.** 66 units



## **Practice Challenge - Objective**

- 9. The sum of 'n' terms of a finite AP is  $\frac{13}{2}$  times the sum of its first and last terms. Which term would be the middle term in this AP?
  - A. 3rd term
  - B. 5th term
  - C. 7th term
  - D. 9th term
- 10. If 8 times the  $8^{\rm th}$  term of an AP is equal to 15 times the  $15^{\rm th}$  term of the AP, then the  $23^{\rm rd}$  term of the AP is \_\_\_\_.
  - **A.** 144
  - **B**. <sub>1</sub>
  - **C**. 0
  - **D**. 8