

1. If the sum of n terms of an A.P. is given by $S_n = 3n + 2n^2$, then the common difference of the A.P. is
 - (A) 2
 - (B) 3
 - (C) 4
 - (D) 6

2. The third term of G.P. is 4. The product of its first 5 term is
 - (A) 4^2
 - (B) 4^3
 - (C) 4^4
 - (D) 4^5

3. If 9 times the 9th term of an A.P. is equal to 13 times the 13th term, then the 22nd term of the A.P. is
 - (A) 0
 - (B) 22
 - (C) 198
 - (D) 220

4. If $x, 2y, 3z$ are in A.P. , where the distinct numbers x, y, z are in G.P. then the common ratio of the G.P. is
 - (A) $1/3$
 - (B) $1/2$
 - (C) 2

(D) 3

5. The minimum value of $4^x + 4^{1-x}$, $x \in R$, is

(A) 0

(B) 4

(C) 1

(D) 2

6. If t_n denotes the n^{th} term of the series $2 + 3 + 6 + 11 + 18 + \dots$ then t_{50} is

(A) $49^2 - 1$

(B) 49^2

(C) $49^2 + 1$

(D) $49^2 + 2$

7. Slope of a line which cuts off intercepts of equal length on the axes is

(A) -1

(B) 0

(C) 2

(D) $\sqrt{3}$

8. A line passes through (2, 2) and is perpendicular to the line $3x + y = 3$. Its y intercept is

(A) $1/3$

(B) $\frac{2}{3}$

(C) 1

(D) $\frac{4}{3}$

9. Equation of line passing through (1, 2) and parallel to line $y = 3x - 1$ is

(A) $y + 2 = x + 1$

(B) $y + 2 = 3(x + 1)$

(C) $y - 2 = 3(x - 1)$

(D) $y - 2 = x - 1$

10. The distance between the lines $y = mx + c_1$ and $y = mx + c_2$ is

(A) $\frac{c_1 - c_2}{\sqrt{1 + m^2}}$

(B) $\frac{c_2 - c_1}{\sqrt{1 + m^2}}$

(C) $\frac{|c_1 - c_2|}{\sqrt{1 + m^2}}$

(D) $\frac{c_1 + c_2}{\sqrt{1 + m^2}}$