

Mathematics Practice Paper

Time Allowed :3 Hours	Maximum Marks :100	Total questions :12
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1. If the 5th term of an A.P. is 11 and the common difference is 2, what is the first term?

- (A) 1
 - (B) 2
 - (C) 3
 - (D) 4
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2. The sum of an A.P. with n terms is $n^2 + 2n + 1$. What is its 6th term?

- (A) 29
 - (B) 19
 - (C) 15
 - (D) None of these
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3. Which of the following is an A.P.?

- (A) 1, 7, 9, 16, ...
 - (B) $x^2, x^3, x^4, x^5, \dots$
 - (C) $x, 2x, 3x, 4x, \dots$
 - (D) $2^2, 4^2, 6^2, 8^2, \dots$
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4. Which of the following is not an A.P.?

- (A) 1, 2, 3, 4, ...
- (B) 3, 6, 9, 12, ...
- (C) 2, 4, 6, 8, ...
- (D) $2^2, 4^2, 6^2, 8^2, \dots$

5. The sum of the first 20 terms of the A.P. 1, 4, 7, 10, ... is:

- (A) 500
 - (B) 540
 - (C) 590
 - (D) 690
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6. Which of the following values is equal to 1?

- (A) $\sin^2 60^\circ + \cos 60^\circ$
 - (B) $\sin 90^\circ \times \cos 90^\circ$
 - (C) $\sin^2 60^\circ$
 - (D) $\sin 45^\circ + \cos 45^\circ$
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7. $\cos^2 A + \tan^2 A = ?$

- (A) $\sin^2 A$
 - (B) $\csc^2 A$
 - (C) 1
 - (D) $\tan^2 A$
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8. $\tan 30^\circ = ?$

- (A) $\sqrt{3}$
 - (B) $\frac{\sqrt{3}}{2}$
 - (C) $\frac{1}{\sqrt{3}}$
 - (D) 1
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9. $\cos 60^\circ = ?$

- (A) $\frac{1}{2}$
- (B) $\frac{\sqrt{3}}{2}$

(C) $\frac{1}{\sqrt{2}}$

(D) 1

10. $\sin^2 60^\circ - \tan^2 45^\circ = ?$

(A) 1

(B) $\frac{1}{2}$

(C) 2

(D) 0

11. The distance between the points $(8 \sin 60^\circ, 0)$ and $(0, 8 \cos 60^\circ)$ is:

(A) 8

(B) 25

(C) 64

(D) 1

12. If $O(0, 0)$ is the origin and $P(x, y)$, then distance OP is:

(A) $x^2 - y^2$

(B) $\sqrt{x^2 + y^2}$

(C) $x^2 + y^2$

(D) None of these