

ONE MARK TEST

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ENGLISH MEDIUM

LESSON – 3

TEST - 2

- 1 Which of the following should be added to make $x^4 + 64$ a perfect square
(A) $4x^2$ (B) $16x^2$ (C) $8x^2$ (D) $-8x^2$
- 2 Find the matrix X if $2X + \begin{pmatrix} 1 & 3 \\ 5 & 7 \end{pmatrix} = \begin{pmatrix} 5 & 7 \\ 9 & 5 \end{pmatrix}$
(A) $\begin{pmatrix} -2 & -2 \\ 2 & -1 \end{pmatrix}$ (B) $\begin{pmatrix} 2 & 2 \\ 2 & -1 \end{pmatrix}$ (C) $\begin{pmatrix} 1 & 2 \\ 2 & 2 \end{pmatrix}$ (D) $\begin{pmatrix} 2 & 1 \\ 2 & 2 \end{pmatrix}$
- 3 If A is a 2×3 matrix and B is a 3×4 matrix, how many columns does AB have
(A) 3 (B) 4 (C) 2 (D) 5
- 4 $y^2 + \frac{1}{y^2}$ is not equal to
(A) $\frac{y^4 + 1}{y^2}$ (B) $\left(y + \frac{1}{y}\right)^2$ (C) $\left(y - \frac{1}{y}\right)^2 + 2$ (D) $\left(y + \frac{1}{y}\right)^2 - 2$
- 5 The square root of $\frac{256x^8y^4z^{10}}{25x^6y^6z^6}$ is equal to
(A) $\frac{16}{5} \sqrt{\frac{x^2z^4}{y^2}}$ (B) $16 \sqrt{\frac{y^2}{x^2z^4}}$ (C) $\frac{16}{5} \sqrt{\frac{y}{xz^2}}$ (D) $\frac{16}{5} \sqrt{\frac{xz^2}{y}}$
- 6 If the roots of the equation $q^2x^2 + p^2x + r^2 = 0$ are the squares of the roots of the equation $qx^2 + px + r = 0$, then q, p, r are in _____
(A) A.P (B) G.P (C) Both A.P and G.P (D) none of these

7 $\frac{3y-3}{y} \div \frac{7y-7}{3y^2}$ is

(A) $\frac{9y}{7}$ (B) $\frac{9y^3}{(21y-21)}$ (C) $\frac{21y^2-42y+21}{3y^3}$ (D) $\frac{7(y^2-2y+1)}{y^2}$

8 If $(x-6)$ is the HCF of $x^2-2x-24$ and x^2-kx-6 then the value of k is

(A) 3 (B) 5 (C) 6 (D) 8

9 The number of points of intersection of the quadratic polynomial x^2+4x+4 with the X axis is

(A) 0 (B) 1 (C) 0 or 1 (D) 2

10 Which of the following can be calculated from the given matrices

$$A = \begin{pmatrix} 1 & 2 \\ 3 & 4 \\ 5 & 6 \end{pmatrix}, B = \begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{pmatrix}, \text{ (i) } A^2 \text{ (ii) } B^2 \text{ (iii) } AB \text{ (iv) } BA$$

(A) (i) and (ii) only

(B) (ii) and (iii) only

(C) (ii) and (iv) only

(D) all of these