

5. $y^2 + \frac{1}{y^2}$ is not equal to
 (1) $\frac{y^4 + 1}{y^2}$ (2) $\left(y + \frac{1}{y}\right)^2$ (3) $\left(y - \frac{1}{y}\right)^2 + 2$ (4) $\left(y + \frac{1}{y}\right)^2 - 2$
6. $\frac{x}{x^2 - 25} - \frac{8}{x^2 + 6x + 5}$ gives
 (1) $\frac{x^2 - 7x + 40}{(x - 5)(x + 5)}$ (2) $\frac{x^2 + 7x + 40}{(x - 5)(x + 5)(x + 1)}$
 (3) $\frac{x^2 - 7x + 40}{(x^2 - 25)(x + 1)}$ (4) $\frac{x^2 + 10}{(x^2 - 25)(x + 1)}$
7. The square root of $\frac{256x^8y^4z^{10}}{25x^6y^6z^6}$ is equal to
 (1) $\frac{16}{5} \left| \frac{x^2z^4}{y^2} \right|$ (2) $16 \left| \frac{y^2}{x^2z^4} \right|$ (3) $\frac{16}{5} \left| \frac{y}{xz^2} \right|$ (4) $\frac{16}{5} \left| \frac{xz^2}{y} \right|$
8. Which of the following should be added to make $x^4 + 64$ a perfect square
 (1) $4x^2$ (2) $16x^2$ (3) $8x^2$ (4) $-8x^2$
9. The solution of $(2x - 1)^2 = 9$ is equal to
 (1) -1 (2) 2 (3) $-1, 2$ (4) None of these
10. The values of a and b if $4x^4 - 24x^3 + 76x^2 + ax + b$ is a perfect square are
 (1) $100, 120$ (2) $10, 12$ (3) $-120, 100$ (4) $12, 10$
11. 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 _____
 (1) $A.P$ (2) $G.P$ (3) Both $A.P$ and $G.P$ (4) none of these
12. Graph of a linear polynomial is a
 (1) straight line (2) circle (3) parabola (4) hyperbola
13. The number of points of intersection of the quadratic polynomial $x^2 + 4x + 4$ with the X axis is
 (1) 0 (2) 1 (3) 0 or 1 (4) 2
14. For the given matrix $A = \begin{pmatrix} 1 & 3 & 5 & 7 \\ 2 & 4 & 6 & 8 \\ 9 & 11 & 13 & 15 \end{pmatrix}$ the order of the matrix A^T is
 (1) 2×3 (2) 3×2 (3) 3×4 (4) 4×3
15. If A is a 2×3 matrix and B is a 3×4 matrix, how many columns does AB have
 (1) 3 (2) 4 (3) 2 (4) 5