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