



**STUDYDADDY**

# Get Homework Help From Expert Tutor

[Get Help](#)



**STUDYDADDY**

# Get Homework Help From Expert Tutor

[Get Help](#)

**Ex.1.** Solve the following into partial fractions

$$\frac{x^3 + 4x^2 + 20x - 7}{(x-1)^2(x^2 + 8)}$$

**Ex.2** Find the equation of the circumcircle of the triangle formed by  $2x+y=4$ ,  $x+2y=5$  and  $x+y=6$

**Ex.3** Solve the following inequality  $\log(x-2)+\log(9-x)<1$

**Ex.4** If  $\vec{a}$  and  $\vec{b}$  are two vectors such that  $|\vec{a} + \vec{b}| = |\vec{a} - \vec{b}|$  then find the angle between  $\vec{a}$  and  $\vec{b}$ .

**Ex.5.** Solve the following trigonometric equation,  $2 \tan \theta - \cot \theta = -1, 0 \leq \theta < 2\pi$

**Ex.6** Find the equation of the tangent to the circle  $x^2 + y^2 = 5$  at (1, -2). Verify that this line also touches the circle  $x^2 + y^2 - 8x + 6y + 20 = 0$ . Find also the point of contact.

**Ex.7** Find,  $f(A)$ , if  $A = \begin{pmatrix} -1 & 2 & -2 \\ 4 & -3 & 4 \\ 4 & -4 & 5 \end{pmatrix}$  and  $f(x) = \frac{x}{x^2 - 1}$

**EX.8**  $B = \begin{pmatrix} 5 - \lambda & 7 & -5 \\ 0 & 4 - \lambda & -1 \\ 2 & 8 & -3 - \lambda \end{pmatrix}$

- (I) Find the determinant of the matrix B.
- (II) Given that  $f(\lambda)$  (the determinant of B) satisfies the equation  $f(A)=0$ , find the inverse of A.



**STUDYDADDY**

**Get Homework Help  
From Expert Tutor**

**Get Help**