

Quiz Questions for Exam #13

Solve each system of equations.

$$1) \begin{cases} -2y^2 - 54x + y - 42 = 0 \\ 2x + y - 2 = 0 \end{cases}$$

$$2) \begin{cases} x^2 + y^2 + 19x + y - 22 = 0 \\ -3x + y + 2 = 0 \end{cases}$$

$$3) \begin{cases} -x^2 + 2y^2 + 10x + 4y - 31 = 0 \\ x^2 + 11y^2 - 10x + 22y - 8 = 0 \end{cases}$$

$$4) \begin{cases} 2x^2 - 4x - 5y - 60 = 0 \\ -2x^2 + 15y^2 + 4x + 65y - 120 = 0 \end{cases}$$

$$5) \begin{cases} x^2 - y^2 - 10x - 2y + 8 = 0 \\ 12x^2 + y^2 - 107x + 2y - 8 = 0 \end{cases}$$

Use the information provided to write the standard form equation of each ellipse.

$$6) \begin{cases} \text{Vertices: } (-3, 8), (-3, -20) \\ \text{Co-vertices: } (10, -6), (-16, -6) \end{cases}$$

Identify the points of discontinuity, holes, vertical asymptotes, x-intercepts, horizontal asymptote, and domain of each.

$$7) f(x) = \frac{x^3 - 2x^2 - 8x}{-4x^2 + 12x}$$

$$8) f(x) = \frac{-2x^2 + 6x + 8}{x^2 - 5x + 4}$$

$$9) f(x) = \frac{x^3 + 4x^2 + 3x}{4x^2 + 4x - 8}$$

$$10) f(x) = \frac{x^3 - 5x^2 + 4x}{-3x^2 + 9x}$$