Hyperbola WS 4 Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Convert the equation to the standard form for a hyperbola by completing the square on x and y.

1) $x^2 - y^2 + 6x - 4y + 4 = 0$ 1) _____

2) $y^2 - 25x^2 + 4y + 50x - 46 = 0$ 2) _____

3) $4x^2 - 16y^2 - 16x + 32y - 64 = 0$ 3) _____

4) $9y^2 - 16x^2 + 18y + 64x - 199 = 0$ 4) _____

1) $(x + 3)^2 - (y + 2)^2 = 1$

2) $\frac{(y + 2)^2}{25} - (x - 1)^2 = 1$

3) $\frac{(x - 2)^2}{16} - \frac{(y - 1)^2}{4} = 1$

4) $\frac{(y + 1)^2}{16} - \frac{(x - 2)^2}{9} = 1$