

Algebra 3 Assignment # 3

Sketch a graph of each of the following please. Label the center, foci and asymptotes.

(1) $9x^2 - 4y^2 = 36$

(2) $16y^2 - 9x^2 = 144$

(3) $4x^2 - 25y^2 - 8x - 100y - 196 = 0$

(4) $y^2 - 4x^2 + 6y + 40x - 95 = 0$

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

(6) $9y^2 - 16x^2 - 54y - 32x - 79 = 0$

(7) $25x^2 - 9y^2 + 200x + 175 = 0$

(8) $x^2 - 9y^2 + 4x + 72y - 149 = 0$

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Answers

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

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

$$(3) \frac{(x - 1)^2}{25} - \frac{(y + 2)^2}{4} = 1$$

$$(4) \frac{(y + 3)^2}{4} - \frac{(x - 5)^2}{1} = 1$$

$$(5) \frac{(x + 3)^2}{4} - \frac{(y - 2)^2}{4} = 1$$

$$(6) \frac{(y - 3)^2}{16} - \frac{(x + 1)^2}{9} = 1$$

$$(7) \frac{(x + 4)^2}{9} - \frac{(y - 0)^2}{25} = 1$$

$$(8) \frac{(x + 2)^2}{9} - \frac{(y - 4)^2}{1} = 1$$