

Name: _____

Date: _____

Acc. Precalculus-Unit 1 Conics

Day 6 – WS Hyperbola Basics

Write the given equations of hyperbolas in Standard Form and sketch a graph, labeling the center, vertices and foci. Sketch the asymptotes as an aid to making the graph.

- 1) $x^2 - 25y^2 + 25 = 0$
- 2) $-4x^2 + 9y^2 - 24x - 90y + 153 = 0$
- 3) $x^2 - 9y^2 + 36y - 72 = 0$
- 4) $16y^2 - x^2 + 2x + 64y - 1 = 0$

From the given information, write the equation of each hyperbola in General Form.

- 5) Center: (-3, 3)
vertices: (-7, 3)
conjugate axis endpoint: (-3, 5)
- 6) Vertices: (0, 2) (6, 2)
asymptotes: $y = \frac{2}{3}x$ and $y = 4 - \frac{2}{3}x$
- 7) Vertices: (2, 3) (2, -3)
foci: (2, 5) (2, -5)
- 8) Vertices: (2, 3) (2, -3) and passes through the point (0, 5)

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