

HYPERBOLA EXAMPLES
MATH 1113

Graph the following hyperbolas. Identify the indicated features.

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

center:

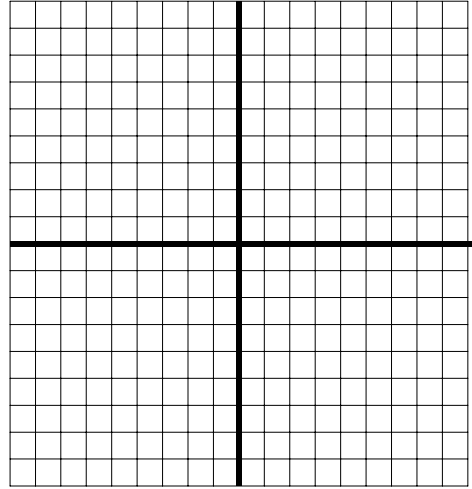
vertices:

transverse axis:

conjugate axis:

foci:

eccentricity:



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

center:

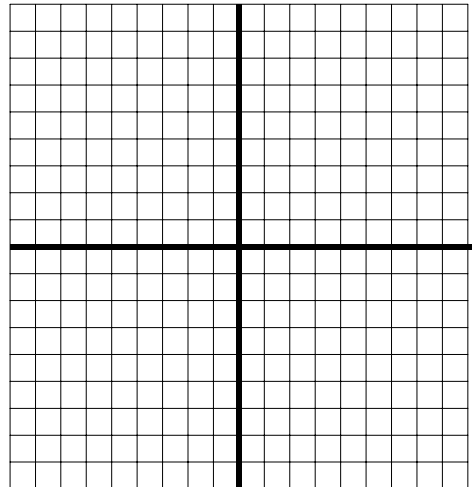
vertices:

transverse axis:

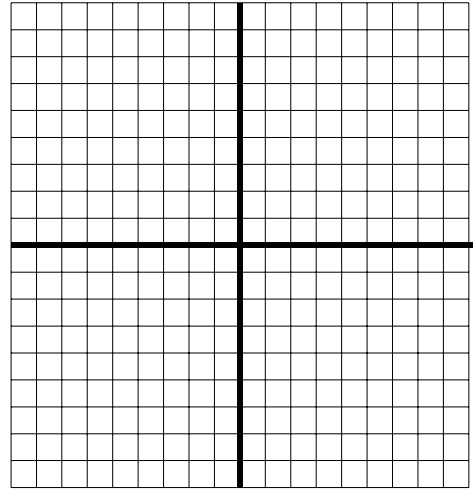
conjugate axis:

foci:

eccentricity:



3. $4y^2 - x^2 + 2x + 8y - 13 = 0$



center:

vertices:

transverse axis:

conjugate axis:

foci:

eccentricity: