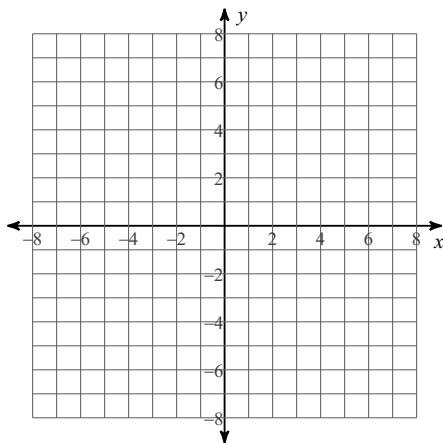


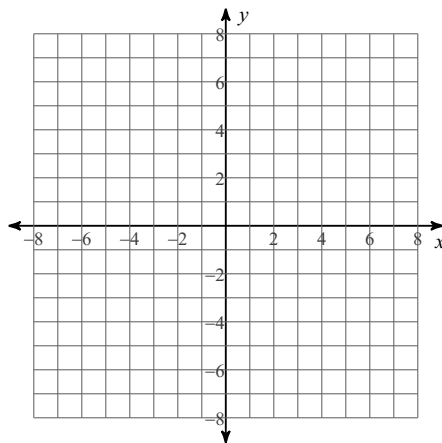
14.4.D1 ~ Hyperbolas: Graphing & Properties Past due on _____ Period _____

For the hyperbola, whose standard form equation is given, identify the coordinates of the center, vertices, and foci. Record these in the table provided (on the flip side). Then sketch its graph.

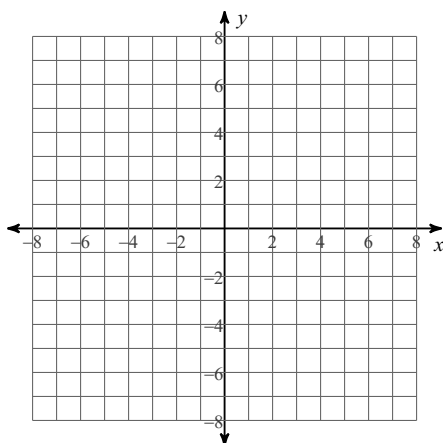
1) $\frac{(x+2)^2}{9} - \frac{y^2}{9} = 1$



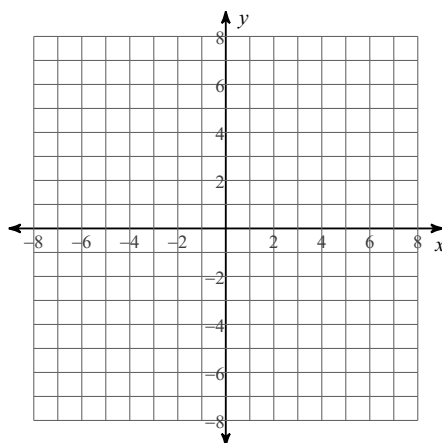
2) $\frac{(x-1)^2}{9} - \frac{(y-1)^2}{16} = 1$



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



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



Consider the hyperbola, whose equation in general form is given. Complete the square to write the equation in standard form. Then identify the coordinates of the center, vertices, and foci. Record these in the table provided (on the flip side).

5) $4x^2 - 9y^2 - 72x + 108y - 324 = 0$

6) $25x^2 - y^2 - 250x + 2y + 524 = 0$

7) $-9x^2 + 5y^2 + 18x + 70y - 664 = 0$

8) $-4x^2 + 121y^2 + 32x - 484y - 64 = 0$