Precalc

Review 10.1-10.4

Quiz 10.3-10.4

MCT 10.1-10.4 is Thurs.

For the equation of each ellipse, find the coordinates of the center, foci, and vertices. Then graph the equation.

20. $\frac{(x-5)^2}{16} + \frac{(y-2)^2}{36} = 1$

C (5, 2)

F (5, 2+2√5) (5, 2−2√5)

V (9, 2) (1, 2)

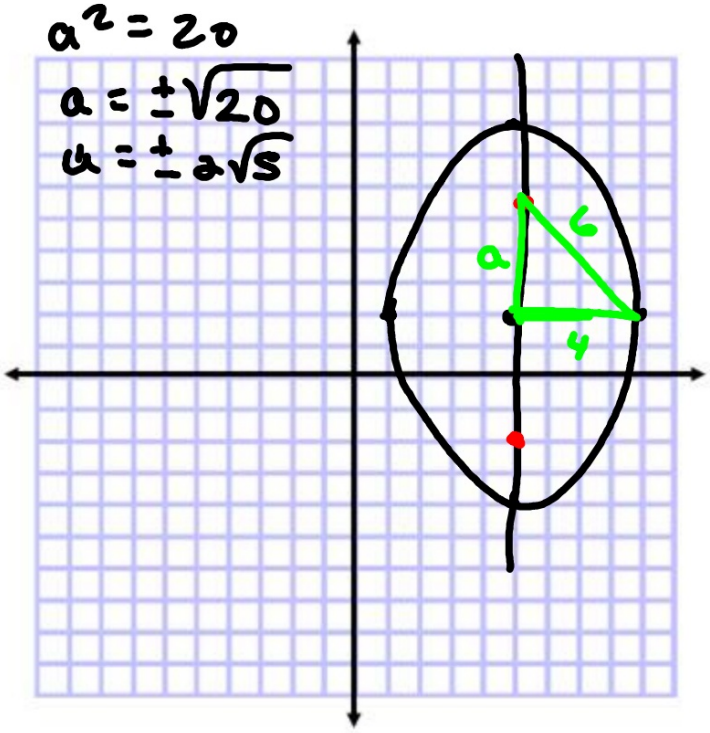
(5, 8) (5, −4)

$a^2 + 16 = 36$

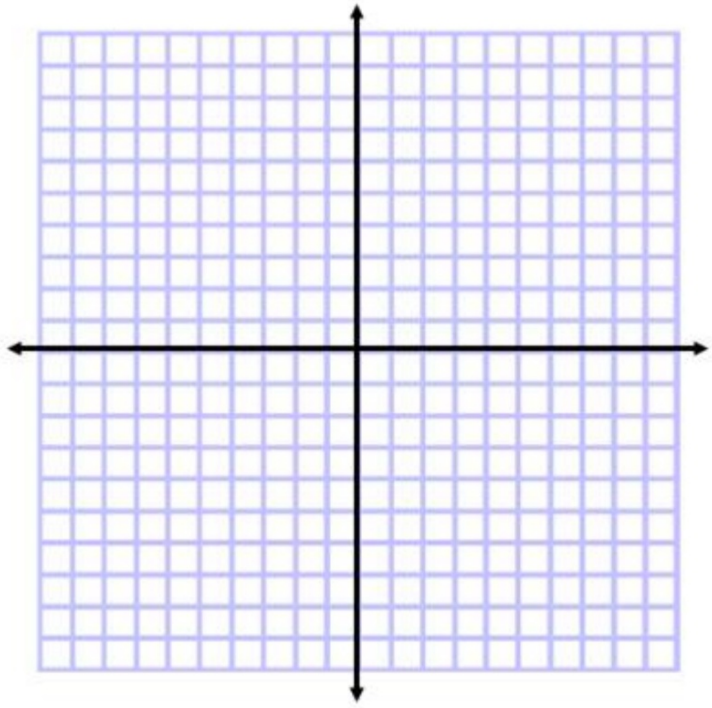
$a^2 = 20$

$a = \pm\sqrt{20}$

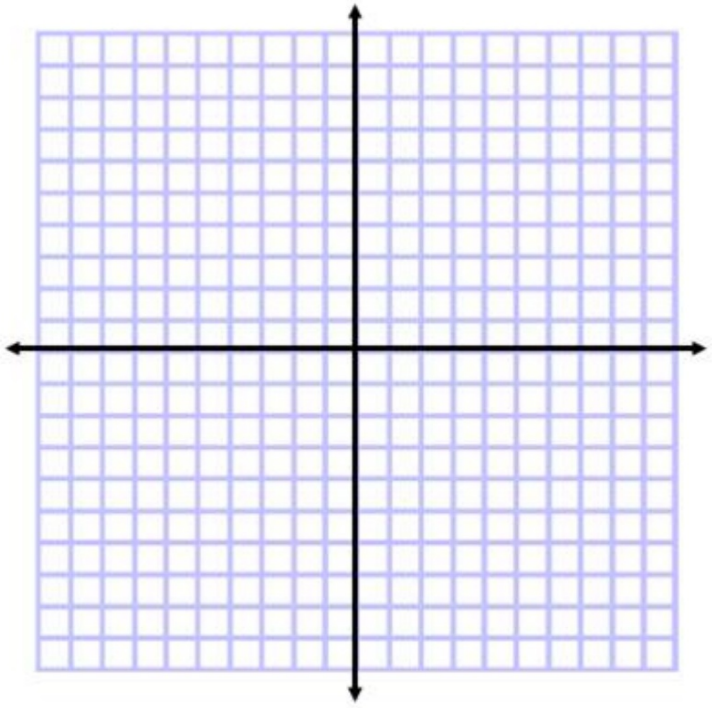
$a = \pm 2\sqrt{5}$



22. $6x^2 + 4y^2 + 24x - 32y + 64 = 0$



18. $3x^2 + 3y^2 + 6x + 12y - 60 = 0$



For the equation of each hyperbola, find the coordinates of the center, the foci, and the vertices and the equations of the asymptotes of its graph. Then graph the equation.

$$\frac{x^2}{25} - \frac{y^2}{16} = 1$$

$a^2 + b^2 = c^2$

$25 + 16 = c^2$

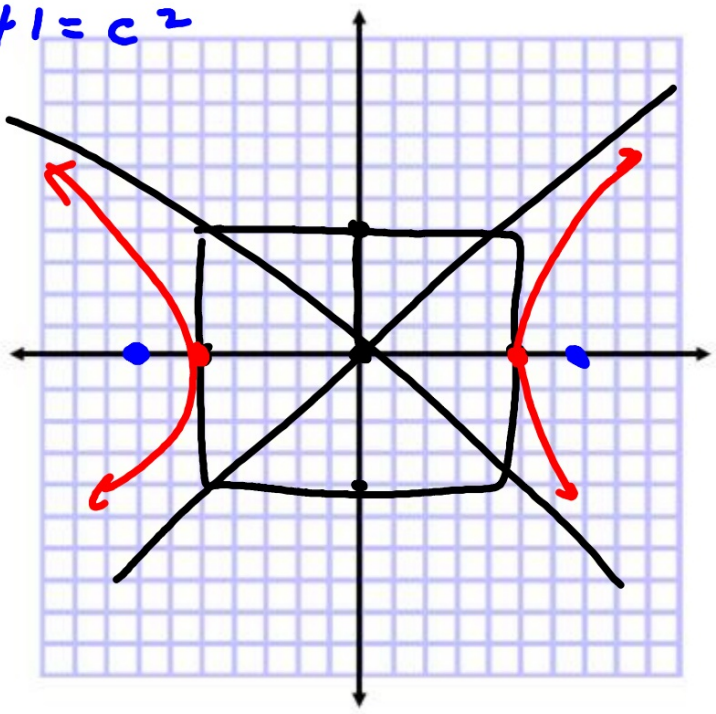
$41 = c^2$

C (0,0)

F $(\pm\sqrt{41}, 0)$ ( )

V (5,0)(-5,0)

asy. $y - 0 = \pm\frac{4}{5}(x - 0)$



trans 8

F (6,0) (-4,0)

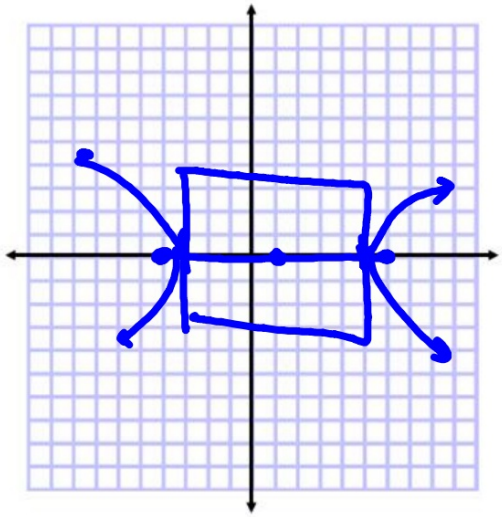
C (1,0)

$\frac{6+-4}{2}$

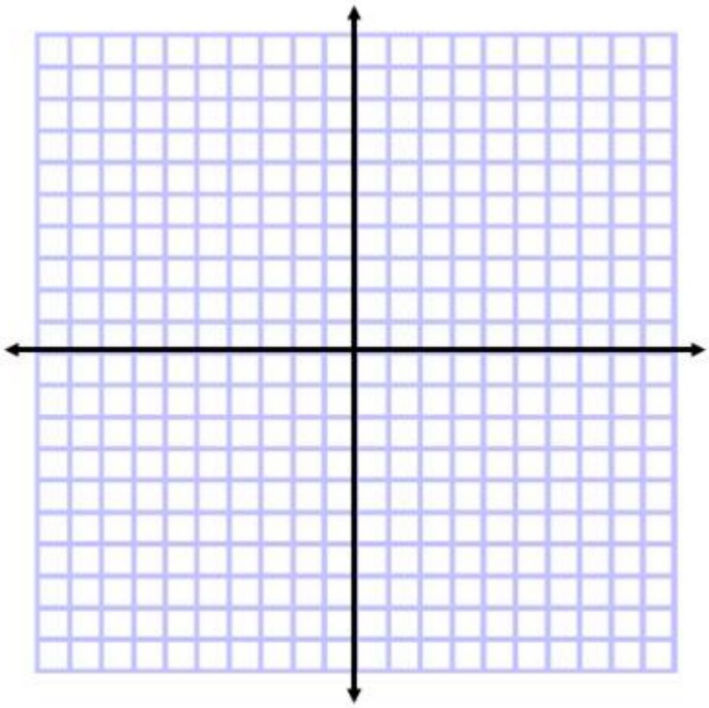
$a^2 + b^2 = c^2$

$16 + b^2 = 25$

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



28. $9x^2 - 16y^2 - 36x - 96y + 36 = 0$

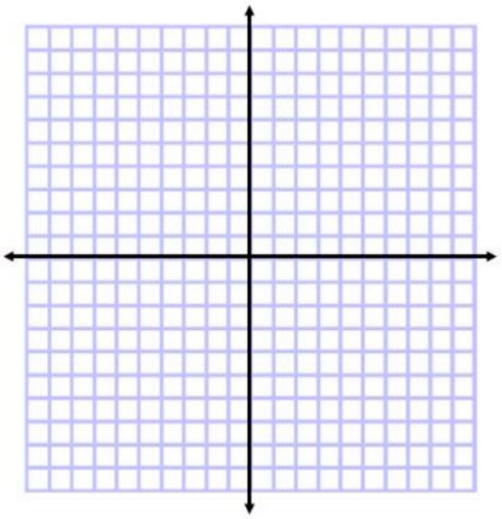


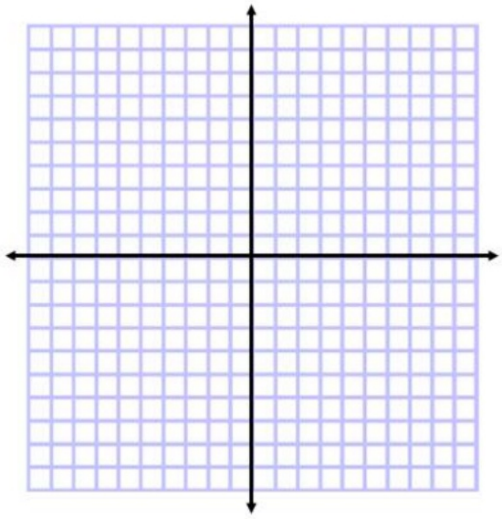
REVIEW EXERCISES

Find the distance between each pair of points with the given coordinates. Then, find the midpoint of the segment that has endpoints at the given coordinates.

11. $(1, -6), (-3, -4)$

12. $(a, b), (a + 3, b + 4)$



Write the standard form of the equation of each circle described. Then graph the equation.

14. center at $(0, 0)$, radius $3\sqrt{3}$