Name: _____   Date: _____

PCH Ellipses   Ms. Loughran

Do Now:

Sketch the graph of each ellipse. State the coordinates of the center, vertices, covertices, and foci. State the length of the major axis and the length of the minor axis.

1. $25(x+2)^2 + 9y^2 = 225$

2. $4(x-1)^2 + 2(y+5)^2 = 8$

3. $9x^2 + 16y^2 - 18x + 96y + 9 = 0$

For #s 1– 6, write the standard form equation of an ellipse having the given properties.

1. Center (0, 0); horizontal major axis of length 10; minor axis of length 6.

2. Center (0, 0); foci $(\pm 2, 0)$; vertices $(\pm 5, 0)$
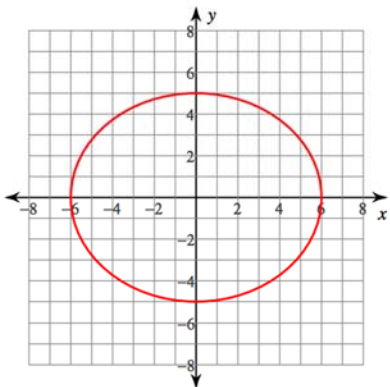
3. Vertices $(0, \pm 5)$; foci $(0, \pm 3)$

4. Endpoints of the major and minor axes are $(\pm 8, 0)$ and $(0, \pm 4)$

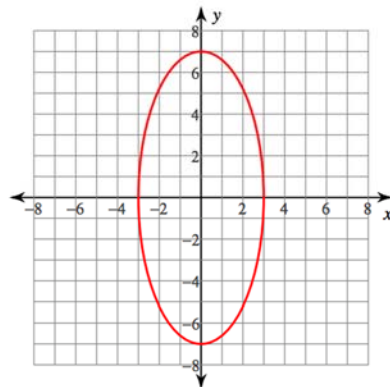5. Endpoints of the major and minor axes are $(\pm 1, 0)$ and $(0, \pm 3)$

6. Endpoints of the major axis are $(-9,5)\, and\, (3,5)$; endpoints of the minor axis are $(-3,6)\, and\, (-3,4)$

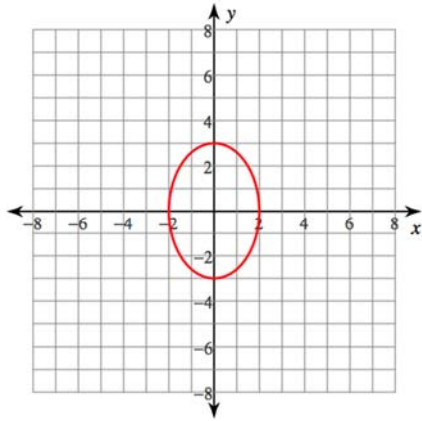For #s 7– 12, write the equation of an ellipse having the given graph.
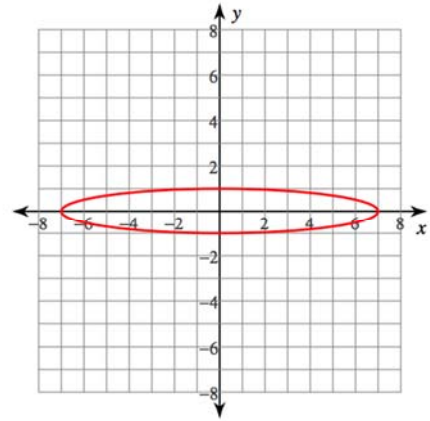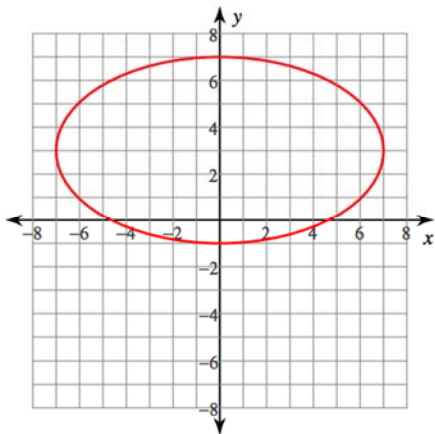
7.

8.

9.

10.

11.

12.