

Algebra 2: Ellipse Review

Name: _____

Find the following for each ellipse and graph:

1. $\frac{x^2}{25} + \frac{y^2}{49} = 1$

2. $150x^2 + 294y^2 = 7350$

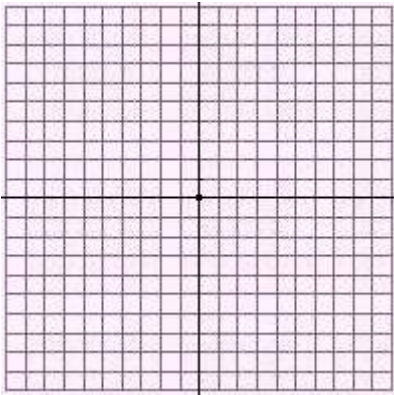
3. $\frac{(x-2)^2}{64} + \frac{(y+6)^2}{16} = 1$

a= b= c=

Foci:

Major Axis:

Minor Axis:

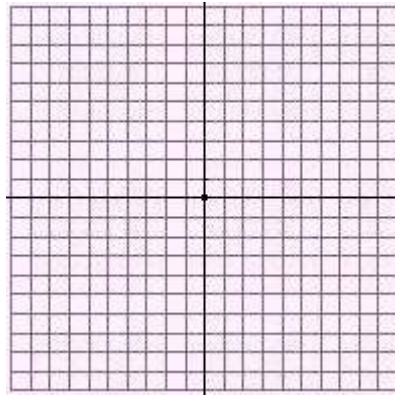


a= b= c=

Foci:

Major Axis:

Minor Axis:

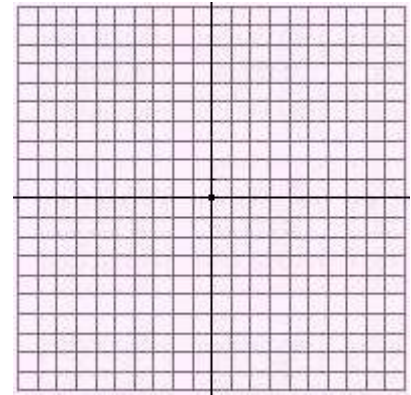


a= b= c=

Foci:

Major Axis:

Minor Axis:



4. $16x^2 + y^2 + 128x - 10y + 265 = 0$

5. $81x^2 + y^2 + 486x + 4y + 652 = 0$

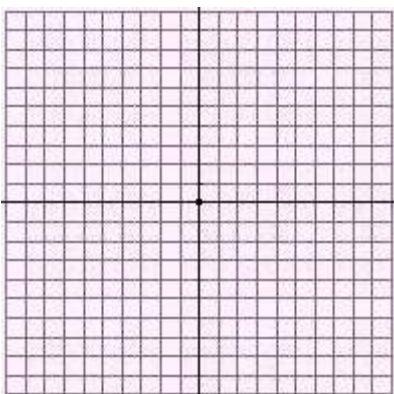
6. $9x^2 + 25y^2 + 90x + 50y + 25 = 0$

a= b= c=

Foci:

Major Axis:

Minor Axis:

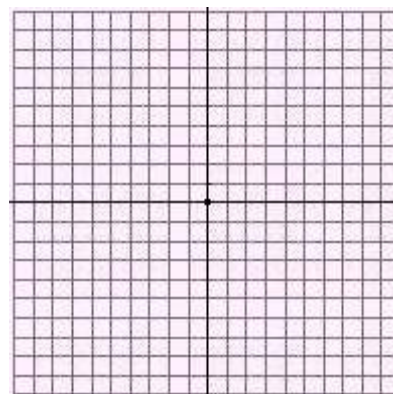


a= b= c=

Foci:

Major Axis:

Minor Axis:

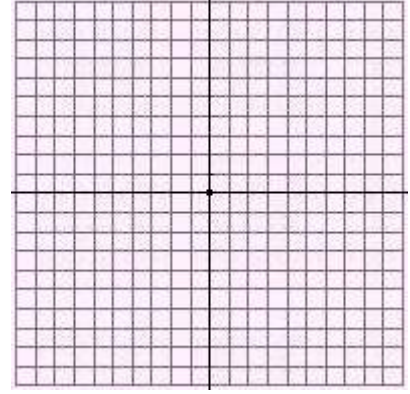


a= b= c=

Foci:

Major Axis:

Minor Axis:



Match the equation of the ellipse with its graph.

7. $\frac{(x-1)^2}{64} + \frac{(y+3)^2}{36} = 1$

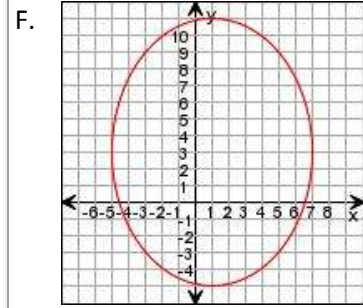
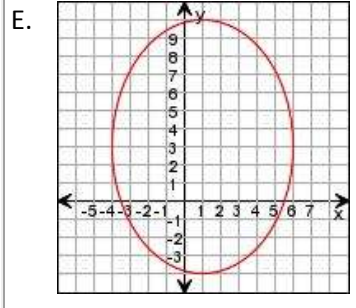
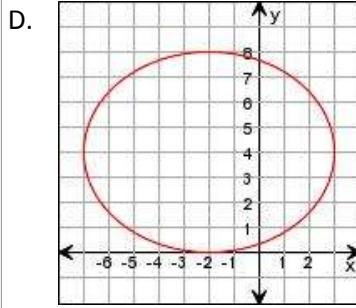
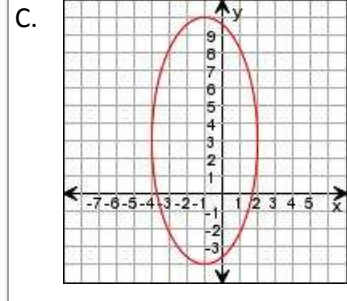
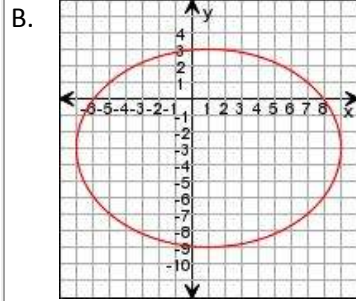
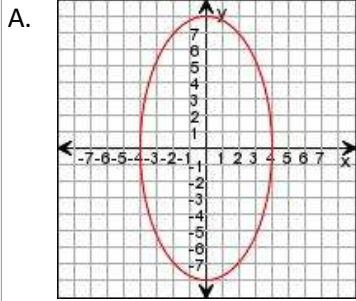
8. $\frac{x^2}{16} + \frac{y^2}{64} = 1$

9. $\frac{(x-1)^2}{36} + \frac{(y-3)^2}{64} = 1$

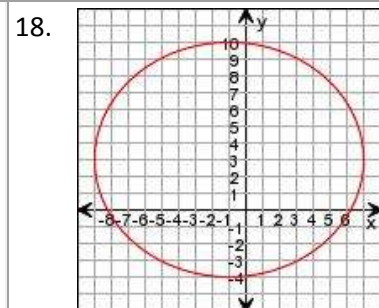
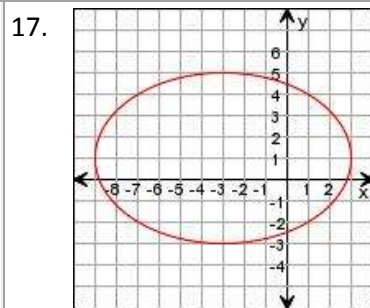
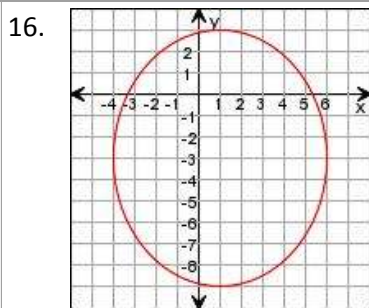
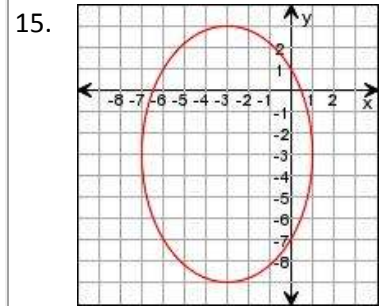
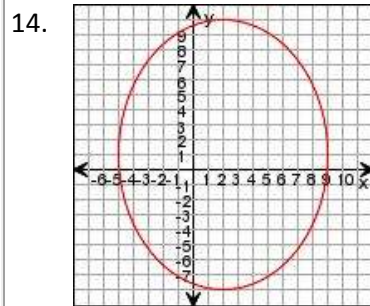
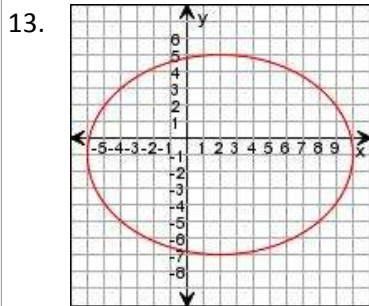
10. $\frac{(x+1)^2}{9} + \frac{(y-3)^2}{49} = 1$

11. $\frac{(x-1)^2}{25} + \frac{(y-3)^2}{49} = 1$

12. $\frac{(x+2)^2}{25} + \frac{(y-4)^2}{16} = 1$



Write an equation for each graph.



Write an equation for each ellipse described below. You may want to make a sketch to assist you.

19. The endpoints of the major axis are $(-10,-5)$ and $(0,-5)$. The endpoints of the minor axis are $(-5,6)$ and $(-5,4)$.

20. The center is at $(-1,-7)$. The major axis is 8 units and the minor axis is 6 units. The major axis is parallel to the y-axis.

21. The endpoints of the major axis are at $(-4,-3)$ and $(-4,15)$. The foci are at $(-4, 6 - \sqrt{65})$ and $(-4, 6 + \sqrt{65})$.

22. The center has coordinates $(2,-4)$. The minor axis is parallel to the x-axis with the length of 6. The major axis has a length of 10.