

Pre-AP Precal
Circles and Ellipses

Name _____

Date _____

Graph the circle and label the center and radius.

1. $x^2 + y^2 = 9$

2. $x^2 + y^2 - 144 = 0$

3. $(x - 3)^2 + y^2 = 64$

4. $(x + 2)^2 + (y + 4)^2 = 16$

Graph each equation (label important features).

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

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

7. $\frac{(x - 2)^2}{16} + \frac{(y - 3)^2}{9} = 1$

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

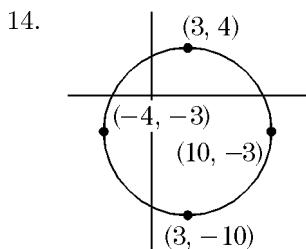
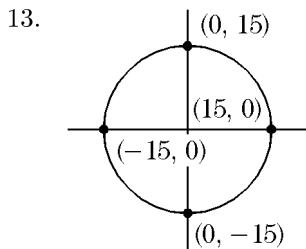
9. Find the equation of the circle with center $(0, 0)$ and radius $r = 6$.

10. Find the equation of the circle with center $(1, 4)$ and radius $r = 4$.

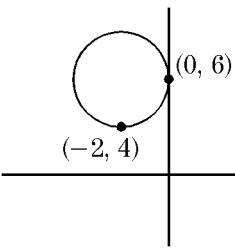
11. Find the equation of the circle with diameter endpoints $(1, 5)$ and $(-1, 7)$.

12. Find the equation of the ellipse with vertices $(3, 0)$, $(-3, 0)$, $(0, 5)$, and $(0, -5)$.

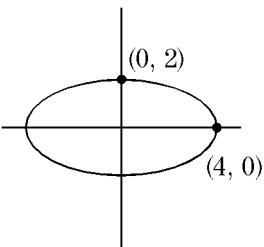
Write the equation of the graph.



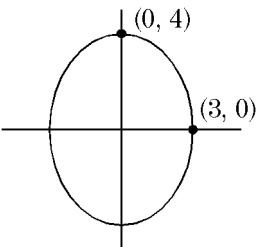
15.



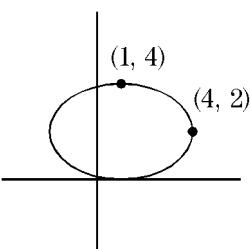
16.



17.



18.



Answer List

- | | | |
|---|--|---|
| 1. $(0,0)$, $r = 3$ | 2. $(0,0)$, $r = 12$ | 3. $(3,0)$, $r = 8$ |
| 4. $(-2,-4)$, $r = 4$ | 5. $(0,0)$; $(\pm 4,0)$, $(0,\pm 6)$; $(0,\pm\sqrt{20})$ | 6. $(0,0)$; $(\pm 7,0)$, $(0,\pm 1)$; $(\pm 4\sqrt{3},0)$ |
| 7. $(2,3)$; $(6,3)$, $(-2,3)$, $(2,6)$, $(2,0)$; $(2 \pm \sqrt{7},3)$ | 8. $(2,0)$; $(1,0)$, $(3,0)$, $(2,5)$, $(2,-5)$; $(2,\pm 2\sqrt{6})$ | 9. $x^2 + y^2 = 36$ |
| 10. $(x-1)^2 + (y-4)^2 = 16$ | 11. $x^2 + (y-6)^2 = 2$ | 12. $\frac{x^2}{9} + \frac{y^2}{25} = 1$ |
| 13. $x^2 + y^2 = 225$ | 14. $(x-3)^2 + (y+3)^2 = 49$ | 15. $(x+2)^2 + (y-6)^2 = 4$ |
| 16. $\frac{x^2}{16} + \frac{y^2}{4} = 1$ | 17. $\frac{x^2}{9} + \frac{y^2}{16} = 1$ | 18. $\frac{(x-1)^2}{9} + \frac{(y-2)^2}{4} = 1$ |

Catalog List

- | | | |
|---------------|---------------|---------------|
| 1. TRI JB 2 | 2. TRI JB 11 | 3. TRI JB 19 |
| 4. TRI JB 21 | 5. TRI JC 1 | 6. TRI JC 7 |
| 7. TRI JC 13 | 8. TRI JC 15 | 9. TRI JE 49 |
| 10. TRI JE 53 | 11. TRI JE 61 | 12. TRI JE 93 |
| 13. TRI JF 13 | 14. TRI JF 15 | 15. TRI JF 18 |
| 16. TRI JF 21 | 17. TRI JF 23 | 18. TRI JF 27 |