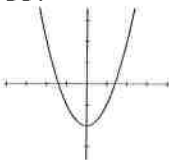
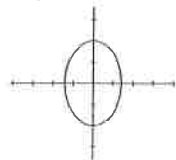
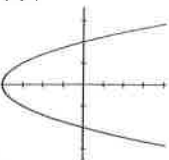


Name _____
 Parabolas Worksheet – AP Emphasis
 Date _____
 Hour _____

Circle the **problem number** of the equation, information or graph that represents a parabola.

1. $\frac{y^2}{4} - \frac{x^2}{25} = 1$
2. $3x^2 + 2x - 4x^2 = 12$
3. $(x+2)^2 + (y-3)^2 = 4$
4. $y = 8(x-7)^2 + 10$
5. $x^2 + 3x + y^2 + 8x = 25$
6. $3x^2 - 4x + 3y^2 + 2x - 50 = 0$
7. $3y^2 - 2x^2 = 12$
8. $\frac{x^2}{256} + \frac{y^2}{1} = 1$
9. $3x^3 + 3y^2 = 36$
10. $-y^2 + 2x + 3x^2 - 40 = 0$
11. $5x^2 + 25x + 3y^2 - 6y + 30 = 0$
12. $y^2 - x^2 = 4$
13. $y = -3x^2 - 4$
14. $(x-6)^2 + (y-6)^2 = 144$
15. $x^2 + y^2 = 9$
16. $x + y^2 - 2 = 0$
17. $\frac{x^2}{121} - \frac{y^2}{9} = 1$
18. $\frac{x^2}{169} + \frac{y^2}{144} = 1$
19. $\frac{x^2}{9} - \frac{y^2}{144} = 1$
20. $x - 3(y-1)^2 = 4$
21. $\frac{y^2}{9} - \frac{x^2}{16} = 1$
22. $\frac{x^2}{36} + \frac{y^2}{16} = 1$
23. $\frac{x^2}{100} + \frac{y^2}{36} = 1$
24. $0 = 2(x-1)^2 + 1 - y$
25. $\left(x + \frac{2}{9}\right)^2 + \left(y + \frac{5}{9}\right)^2 = \frac{4}{9}$
26. center is (3, 4); r = 3
27. vertex is (2, 6); opens up; focus is (2, 7);
directrix is y = 5
28. center is (0, 0); The asymptotes
are $y = \pm \frac{3}{4}x$. The vertices are (4, 0)
and (-4, 0).
29. vertex is (-2, 2); opens down; focus is
(-2, 0); directrix y = 4
30. center is (-2, -6); r = 4
31. center is (0, 0); The asymptotes
are $y = \pm \frac{1}{2}x$. The vertices are (0, 5)
and (0, -5).
32. vertex is (2, 4); opens right; focus is
(3, 4); directrix is x = 1
33. 
34. 
35. 

Name _____
 Parabolae and Circles Worksheet
 Hour _____

Match the equation to the correct information and the correct graph.

1. $(x + 2)^2 + (y - 3)^2 = 4$

2. $y = 8(x - 7)^2 + 10$

3. $(x - 1)^2 + (y + 3)^2 = 9$

4. $(x + 4)^2 + (y - 4)^2 = 25$

5. $y = -3(x + 2)^2 - 4$

6. $(x - 6)^2 + (y - 6)^2 = 16$

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

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

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

10. $x = 2(y - 1)^2 + 1$

11. center is (0, 0); r = 3

12. center is (-2, 3); r = 2

13. vertex is (-1, -4); opens left; focus is $(-1 \frac{1}{8}, -4)$; directrix is $x = -\frac{7}{8}$

14. vertex is (-2, -4); opens down; focus is $(-2, -4 \frac{1}{12})$; directrix is $y = 3 \frac{11}{12}$

15. center is (6, 6); r = 4

16. vertex is (1, 1); opens right; focus is $(1 \frac{1}{8}, 1)$; directrix is $x = \frac{7}{8}$

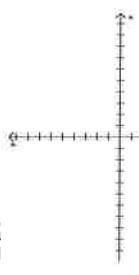
17. center is (-4, 4); r = 5

18. vertex is (7, 10); opens up; focus is $(7, 10 \frac{1}{32})$; directrix is $y = 9 \frac{31}{32}$

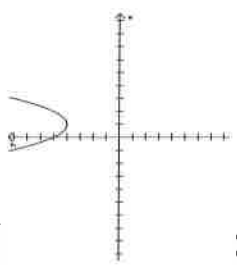
19. vertex is (1, 4); opens up; focus is $(1, 4 \frac{1}{4})$; directrix is $y = 3 \frac{3}{4}$

20. center is (1, -3); r = 3

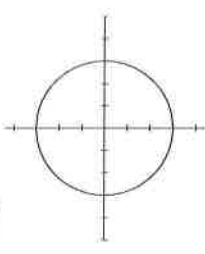
21.



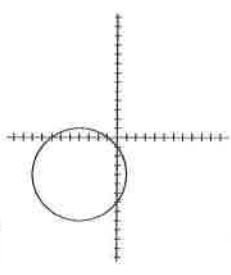
22.



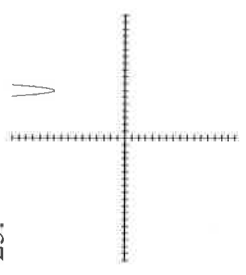
23.



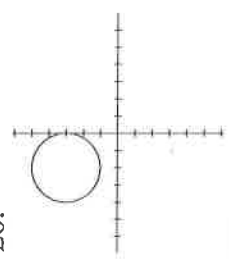
24.



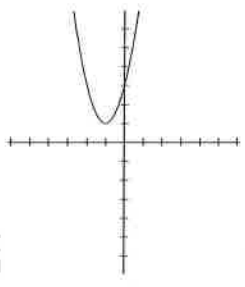
25.



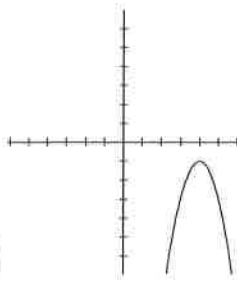
26.



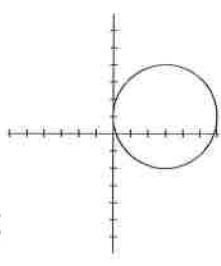
27.



28.



29.



30.

