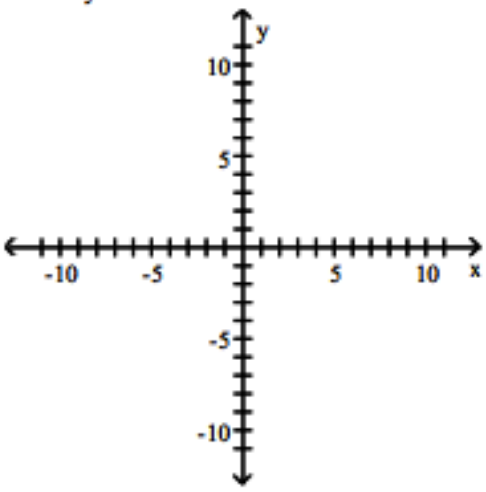
Name _____
Chapter 2 Test

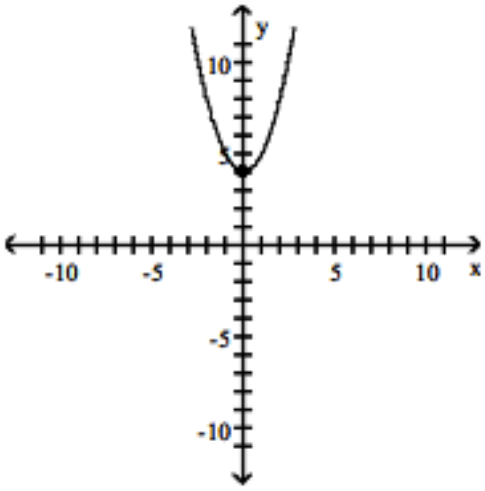
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1. Graph the equation by plotting points.

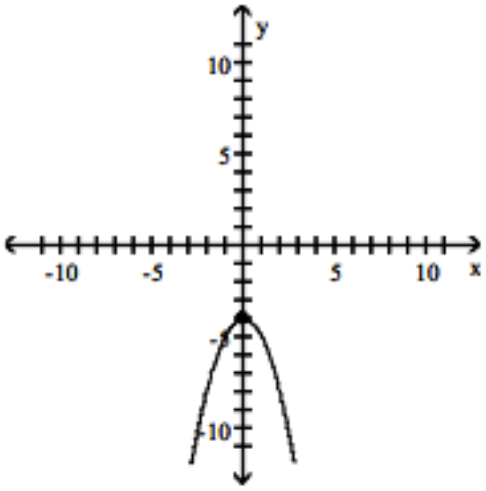
$x^2 + 4y = 16$



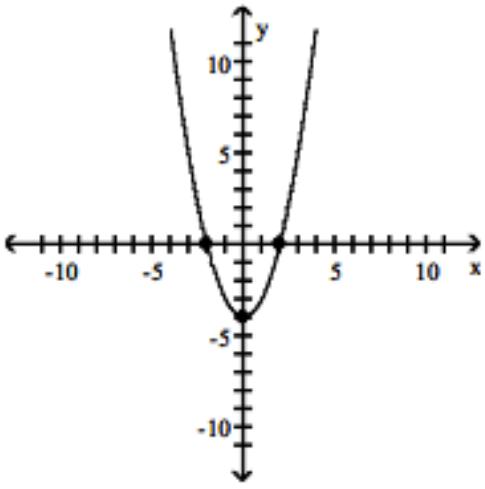
A)



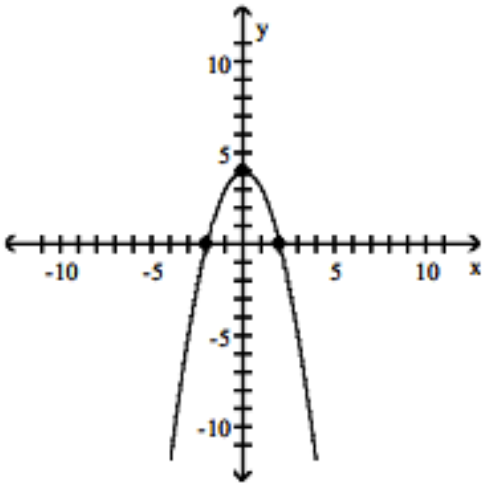
B)



C)



D)



2. If (3, b) is a point on the graph of $3x - 2y = 17$, what is b?

A) $\frac{11}{3}$ B) 4 C) $\frac{23}{3}$ D) −4

3. The height of a baseball (in feet) at time t (in seconds) is given by $y = -16x^2 + 80x + 5$. Which one of the following points is not on the graph of the equation?

A) (2, 117) B) (4, 69) C) (1, 69) D) (3, 101)

#4-6, LIST THE INTERCEPTS FOR THE GRAPH OF THE EQUATION

4. $y^2 = x + 1$

A) (0, −1), (−1, 0), (0, 1)
B) (−1, 0), (0, −1), (1, 0)
C) (1, 0), (0, 1), (0, −1)
D) (0, −1), (1, 0), (0, 1)

5. $4x^2 + 16y^2 = 64$

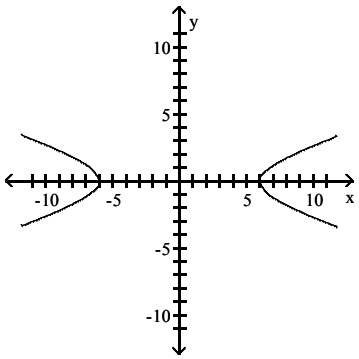
A) (−4, 0), (0, −2), (0, 2), (4, 0)
B) (−4, 0), (−16, 0), (16, 0), (4, 0)
C) (−16, 0), (0, −4), (0, 4), (16, 0)
D) (−2, 0), (−4, 0), (4, 0), (2, 0)

6. $y = x^3 - 27$

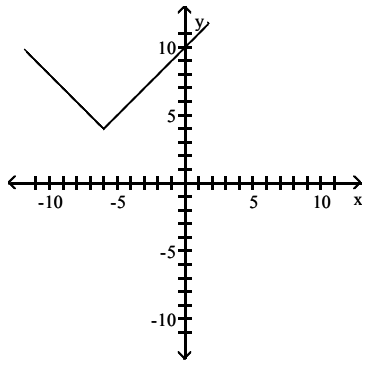
A) (−27, 0), (0, 3) B) (0, −3), (0, 3) C) (0, −3), (−3, 0) D) (0, −27), (3, 0)

List the intercepts of the graph.Tell whether the graph is symmetric with respect to the x–axis, y–axis, origin, or none of these.

7.



A) intercepts: (−6, 0) and (6, 0)
symmetric with respect to origin
B) intercepts: (−6, 0) and (6, 0)
symmetric with respect to x–axis, y–axis, and origin
C) intercepts: (0, −6) and (0, 6)
symmetric with respect to x–axis, y–axis, and origin
D) intercepts: (0, −6) and (0, 6)
symmetric with respect to y–axis

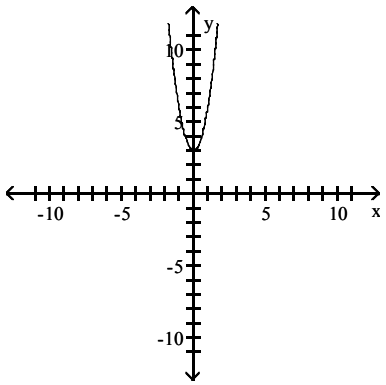
8. 

A) intercept: (10, 0)
symmetric with respect to y–axis

B) intercept: (0, 10)
no symmetry

C) intercept: (0, 10)
symmetric with respect to x–axis

D) intercept: (10, 0)
no symmetry

9. 

A) intercept: (0, 3)
symmetric with respect to y–axis

B) intercept: (0, 3)
symmetric with respect to origin

C) intercept: (3, 0)
symmetric with respect to x–axis

D) intercept: (3, 0)
symmetric with respect to y–axis

Determine whether the graph of the equation is symmetric with respect to the x –axis, the y–axis, and/or the origin.

10. $y = x + 1$

A) x–axis
B) origin
C) y–axis
D) x–axis, y–axis, origin
E) none

11. $4x^2 + 16y^2 = 64$

A) y–axis
B) x–axis
C) origin
D) x–axis, y–axis, origin
E) none

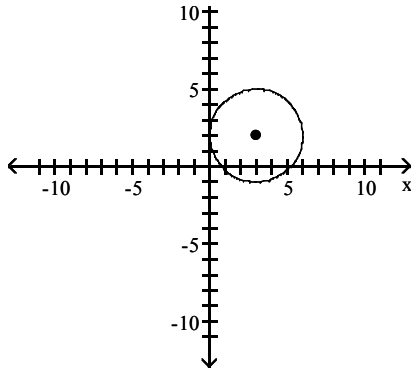
12. $y = \dfrac{9x}{x^2 + 81}$

A) x–axis
B) y–axis
C) origin
D) x–axis, y–axis, origin
E) none

13. If a graph is symmetric with respect to the origin and it contains the point (−4, 7), which of the following points is also on the graph?

A) (7, −4) B) (4, 7) C) (4, −7) D) (−4, −7)

14. **WRITE THE EQUATION OF THE CIRCLE IN STANDARD FORM.**

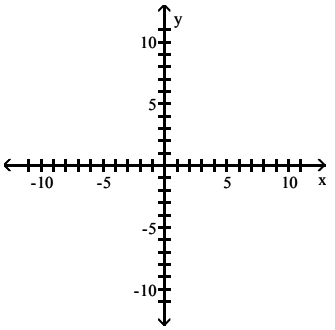


A) $(x + 2)^2 + (y + 3)^2 = 9$ B) $(x - 2)^2 + (y - 3)^2 = 9$

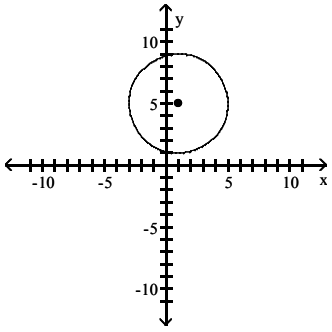
C) $(x - 3)^2 + (y - 2)^2 = 9$ D) $(x + 3)^2 + (y + 2)^2 = 9$

15. **GRAPH THE CIRCLE OF THE GIVEN EQUATION.**

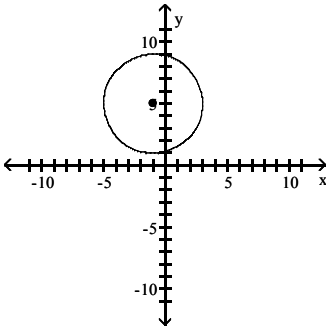
$(x + 1)^2 + (y - 5)^2 = 16$



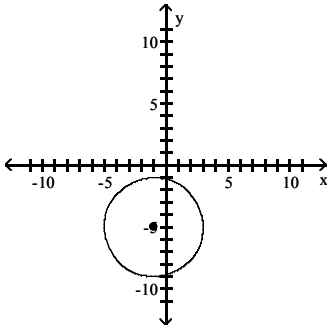
A)



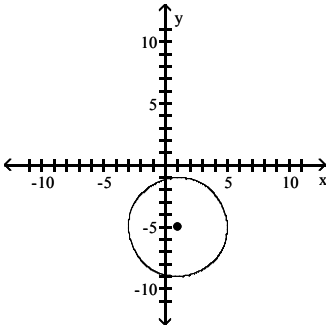
B)



C)

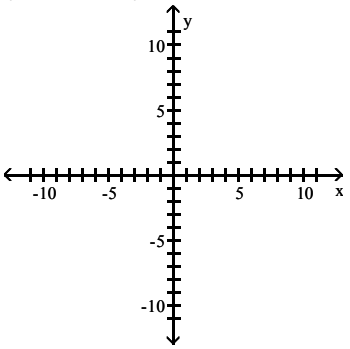


D)

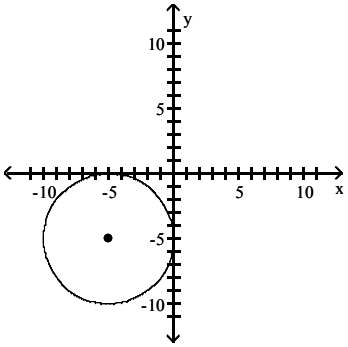


Find the center (h, k) and radius r of the circle. Graph the circle.

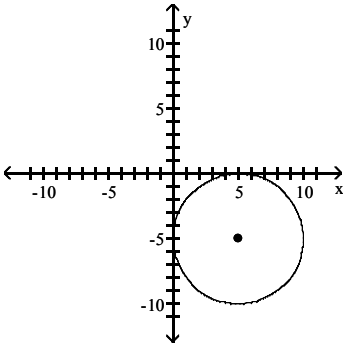
16. $x^2 + y^2 - 10x - 10y + 25 = 0$



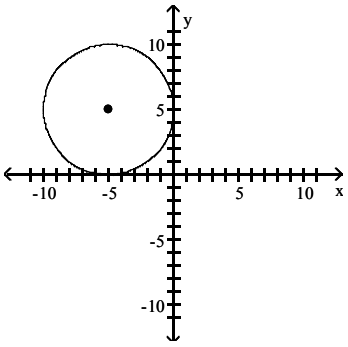
A) (h, k) = (−5, −5); r = 5



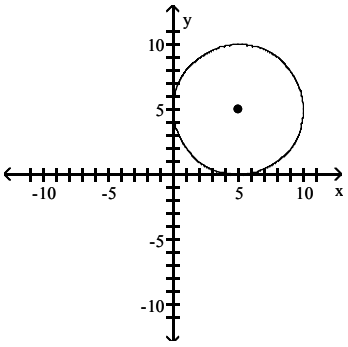
B) (h, k) = (5, −5); r = 5



C) (h, k) = (−5, 5); r = 5



D) (h, k) = (5, 5); r = 5



17. **FIND THE CENTER (h,k) AND RADIUS r OF THE CIRCLE WITH THE GIVEN EQUATION.**

$x^2 + y^2 - 16x - 2y + 65 = 49$

A) (h, k) = (1, 8); r = 7

B) (h, k) = (−1, −8); r = 49

C) (h, k) = (−8, −1); r = 49

D) (h, k) = (8, 1); r = 7