

Find the distance between the pair of points.

1) (4, 2) and (0, -1)

A) 10

B) 25

C) 6

D) 5

1) _____

2) (0, -4) and (6, -4)

A) 36

B) $2\sqrt{13}$

C) 4

D) 6

2) _____

Find the midpoint of the line segment whose end points are given.

3) (2, 1) and (1, 7)

A) (3, 8)

B) (1, -6)

C) $(\frac{1}{2}, -3)$

D) $(\frac{3}{2}, 4)$

3) _____

4) $(-\frac{1}{2}, 1)$ and (1, 2)

A) $(\frac{1}{2}, 3)$

B) $(\frac{3}{4}, \frac{1}{2})$

C) $(\frac{1}{4}, \frac{3}{2})$

D) $(-\frac{3}{4}, -\frac{1}{2})$

4) _____

Write the standard form of the equation of the circle with the given center and radius.

5) (5, 7); 9

A) $(x - 7)^2 + (y - 5)^2 = 9$

B) $(x - 5)^2 + (y - 7)^2 = 81$

C) $(x + 5)^2 + (y + 7)^2 = 81$

D) $(x + 7)^2 + (y + 5)^2 = 9$

5) _____

Find the center and the radius of the circle.

6) $(x + 5)^2 + (y - 3)^2 = 16$

A) (-5, 3), r = 4

B) (3, -5), r = 4

C) (-3, 5), r = 16

D) (5, -3), r = 16

6) _____

Graph the equation.

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

8) $x^2 + y^2 - 2x - 2y - 34 = 0$

Complete the square and write the equation in standard form. Then give the center and radius of the circle.

9) $x^2 + 8x + 16 + y^2 + 2y + 1 = 36$

Graph the equation.

10) $x^2 + y^2 + 4x + 8y + 16 = 0$

Complete the square and write the equation in standard form. Then give the center and radius of the circle.

11) $x^2 + y^2 - 18x + 2y + 82 = 4$

12) $12x^2 + 12y^2 = 144$

A) $x^2 + y^2 = 12$

(0, 0), $r = 12$

C) $(x - 12)^2 + (y - 12)^2 = 12$

(12, 12), $r = 2\sqrt{3}$

B) $x^2 + y^2 = 144$

(0, 0), $r = 12$

D) $x^2 + y^2 = 12$

(0, 0), $r = 2\sqrt{3}$

12) _____

Use the vertex and intercepts to sketch the graph of the quadratic function.

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

Determine whether the given quadratic function has a minimum value or maximum value. Then find the coordinates of the minimum or maximum point.

14) $f(x) = x^2 + 2x - 6$

15) $f(x) = -5x^2 - 10x$

Solve the problem.

16) You have 136 feet of fencing to enclose a rectangular region. Find the dimensions of the rectangle that maximize the enclosed area.

A) 34 ft by 34 ft

B) 36 ft by 32 ft

C) 68 ft by 68 ft

D) 68 ft by 17 ft

16) _____

17) A developer wants to enclose a rectangular grassy lot that borders a city street for parking. If the developer has 244 feet of fencing and does not fence the side along the street, what is the largest area that can be enclosed?

A) 11,163 ft²

B) 7442 ft²

C) 14,884 ft²

D) 3721 ft²

17) _____

Solve the polynomial inequality and graph the solution set on a number line. Express the solution set in interval notation.

18) $(x - 4)(x + 7) > 0$

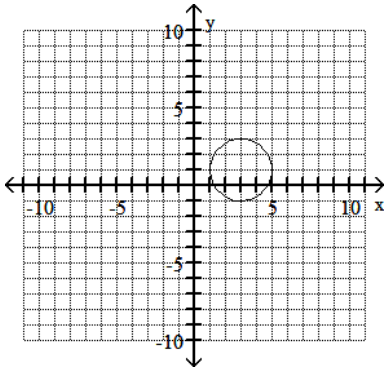
19) $(x + 2)(x - 2) \leq 0$

20) $4x^2 < 3x + 1$

Answer Key

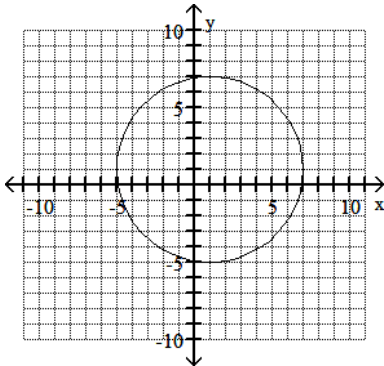
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- 1) D
- 2) D
- 3) D
- 4) C
- 5) B
- 6) A
- 7)



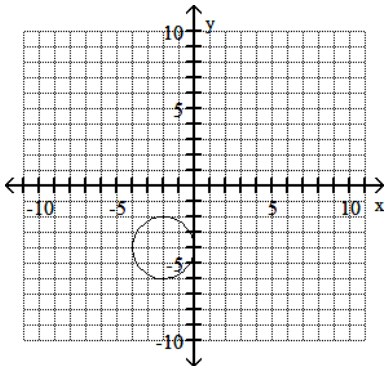
Domain = (1, 5), Range = (-1, 3)

8)



9) $(x + 4)^2 + (y + 1)^2 = 36$
 $(-4, -1), r = 6$

10)



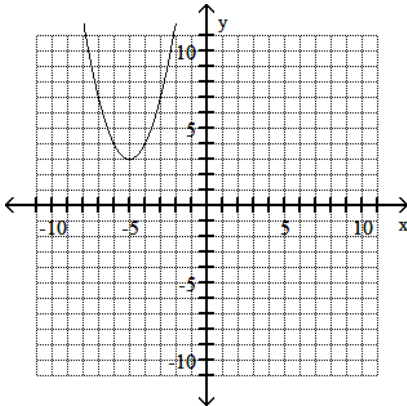
11) $(x - 9)^2 + (y + 1)^2 = 4$
 $(9, -1), r = 2$

12) D

Answer Key

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13)



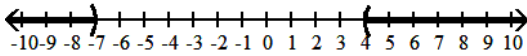
14) minimum; $(-1, -7)$

15) maximum; $(-1, 5)$

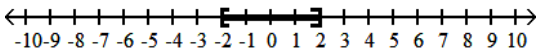
16) A

17) B

18) $(-\infty, -7) \cup (4, \infty)$



19) $[-2, 2]$



20) $\left[-\frac{1}{4}, 1\right)$

