60. **Multiple Choice** Which of the following is equal to $\left|1 - \sqrt{3}\right|$?

(A) $1 - \sqrt{3}$

(B) $\sqrt{3} - 1$

(C) $(1 - \sqrt{3})^2$

(D) $\sqrt{2}$

(E) $\sqrt{1/3}$

61. **Multiple Choice** Which of the following is the midpoint of the line segment with endpoints -3 and 2?

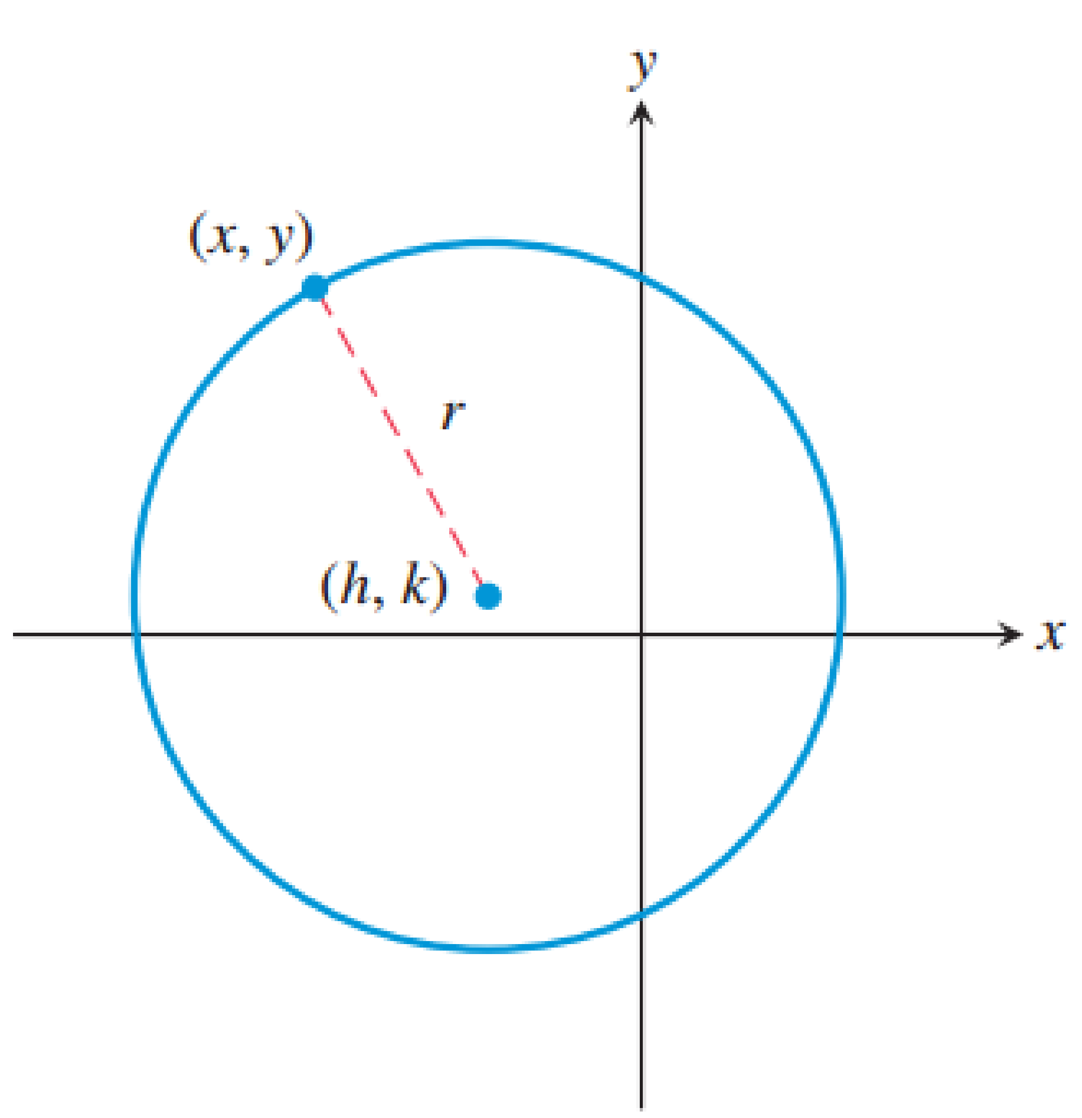
(A) $5/2$

(B) 1

(C) $-1/2$

(D) -1

(E) $-5/2$



$$\sqrt{(x-h)^2+(y-k)^2}=r$$

DEFINITION **Standard Form Equation of a Circle**

The **standard form equation of a circle** with center (h, k) and radius r is

$$(x - h)^2 + (y - k)^2 = r^2.$$

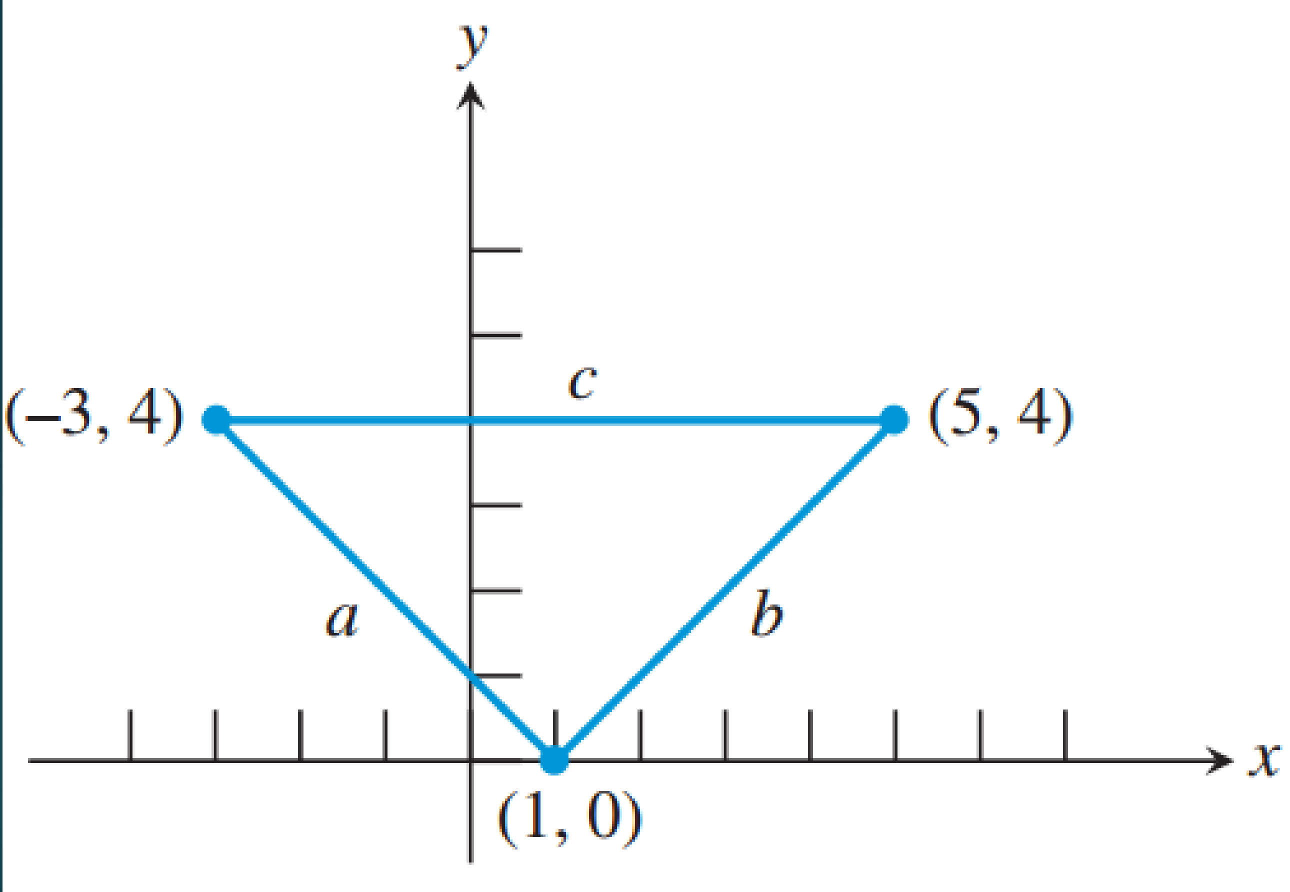
Finding Standard Form Equations of Circles

Find the standard form equation of the circle.

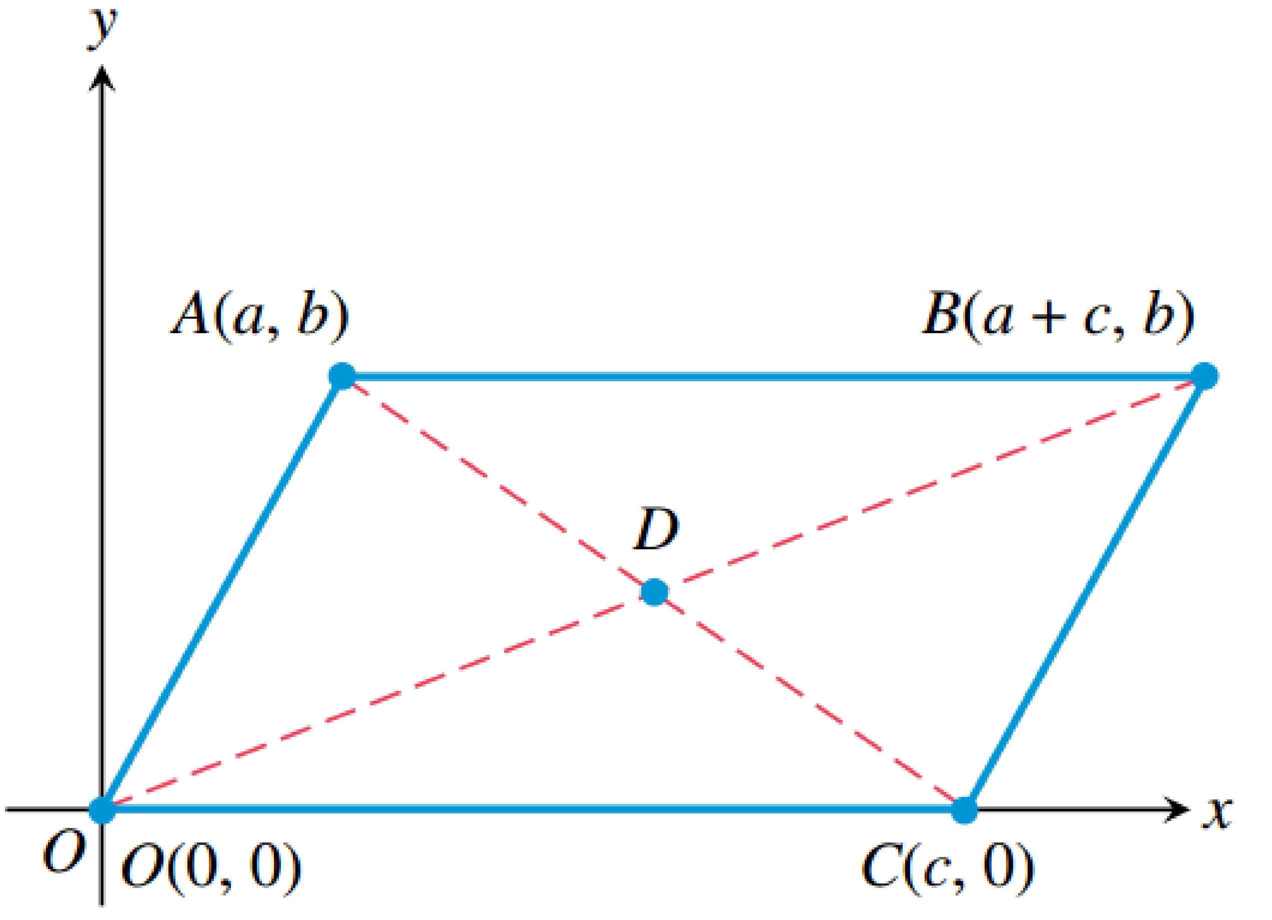
(a) Center $(-4, 1)$, radius 8

(b) Center $(0, 0)$, radius 5

Verifying Right Triangles



It is a fact from geometry that the diagonals of a parallelogram bisect each other.



Assignment:

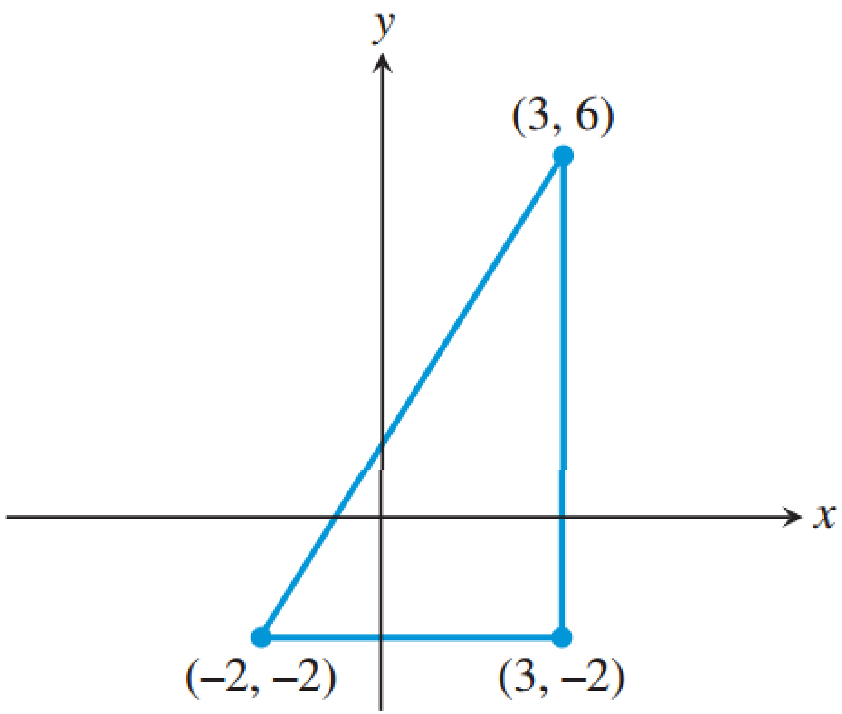
37. Prove that the figure determined by the points is an isosceles triangle: (1, 3), (4, 7), (8, 4)

38. Prove that the diagonals of the figure determined by the points bisect each other.

(a) Square (−7, −1), (−2, 4), (3, −1), (−2, −6)

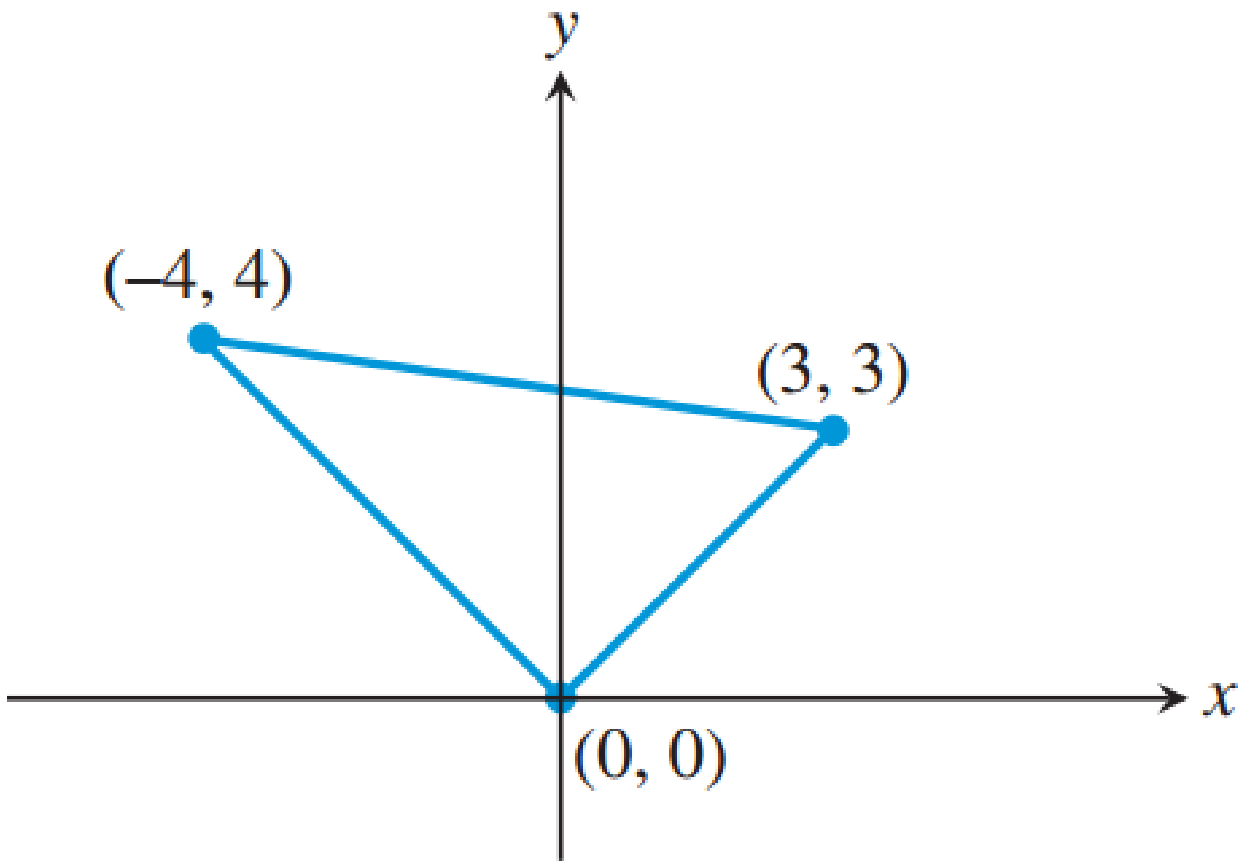
(b) Parallelogram (−2, −3), (0, 1), (6, 7), (4, 3)

39. **(a)** Find the lengths of the sides of the triangle in the figure.



(b) **Writing to Learn** Show that the triangle is a right triangle.

40. **(a)** Find the lengths of the sides of the triangle in the figure.



(b) **Writing to Learn** Show that the triangle is a right triangle.

In Exercises 41–44, find the standard form equation for the circle.

41. Center (1, 2), radius 5

42. Center $(-3, 2)$, radius 1

43. Center $(-1, -4)$, radius 3

44. Center (0, 0), radius $\sqrt{3}$

In Exercises 45–48, find the center and radius of the circle.

45. $(x - 3)^2 + (y - 1)^2 = 36$

46. $(x + 4)^2 + (y - 2)^2 = 121$

47. $x^2 + y^2 = 5$

48. $(x - 2)^2 + (y + 6)^2 = 25$

54. Writing to Learn Isosceles but Not Equilateral Triangle Prove that the triangle determined by the points $(3, 0)$, $(-1, 2)$, and $(5, 4)$ is isosceles but not equilateral.

55. Writing to Learn Equidistant Point from Vertices of a Right Triangle Prove that the midpoint of the hypotenuse of the right triangle with vertices $(0, 0)$, $(5, 0)$, and $(0, 7)$ is equidistant from the three vertices.