

1.

Find the distance between each pair of points:

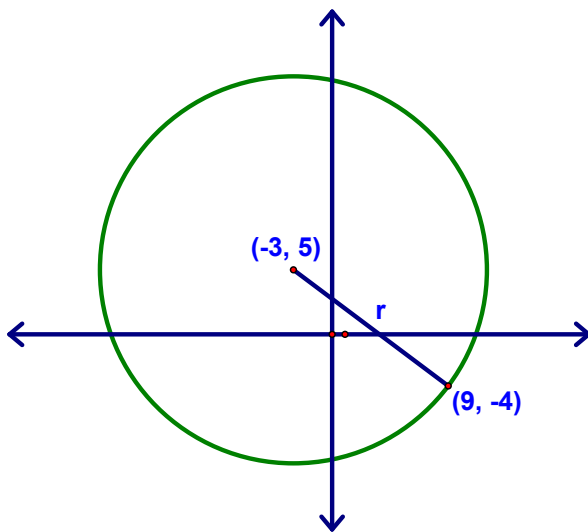
a. (4, 0) and (6, 0)

c. (4, 1) and (7, 5)

e. The origin and (2, 5)

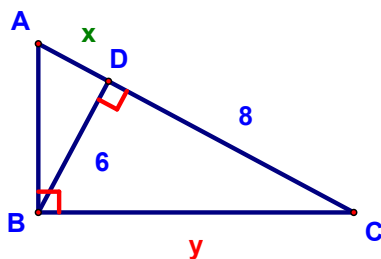
5.

Find the area of a circle that passes through (9, -4) and whose center is (-3, 5)



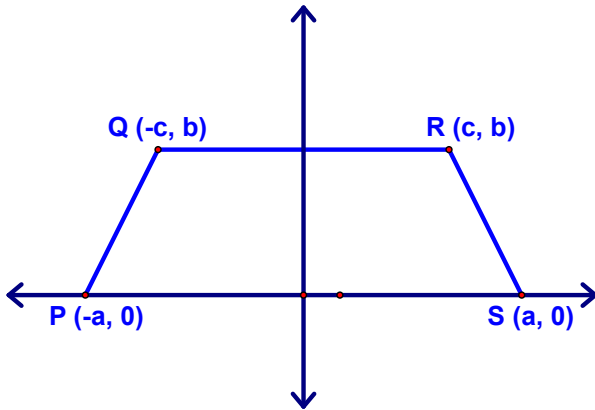
7.

Find AD and BC



9.

PQRS is a trapezoid



a. Find PQ and SR and verify that PQRS is an isosceles trapezoid.

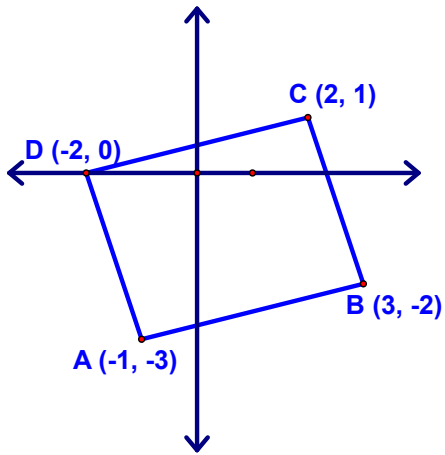
b. Prove that the diagonals \overline{PR} and \overline{QS} are congruent.

14.

Show that (7, 11), (7, -13), and (14, 4) lie on a circle with its center at (2, -1).

16.

Show that the parallelogram whose vertices are $(-1, -3)$, $(2, 1)$, $(3, -2)$, and $(-2, 0)$ is not a rhombus.



21.

Find the altitude of a trapezoid with sides having the respective lengths 2, 41, 20, 41

22.

A model rocket was shot up (at an angle) to a point 20 m above the ground, hit a smokestack, and then dropped straight down to a point 11 m from its launch site. Find, to the nearest meter, the total distance traveled from launch to touchdown.