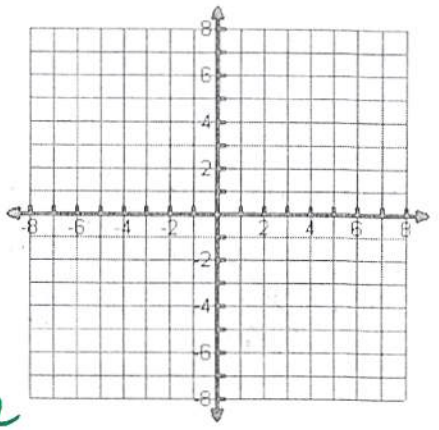
Points on a Circle Practice Worksheet

Name: _____ Date: _____

1. Determine whether Point A lies on the circle whose center is Point C and which contains the Point P. Justify your answer mathematically using a graph of the circle.

a. Point A $(1, \sqrt{3})$; Point C(0,0); Point P(0,2)

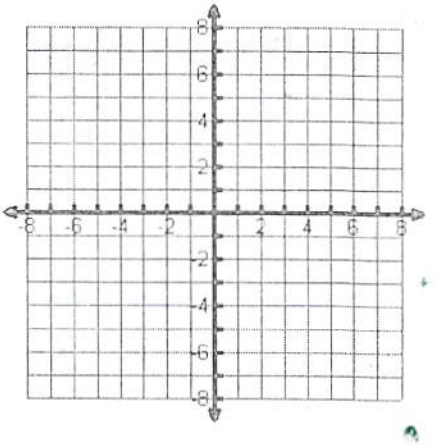


C to P: r=2

C to A: d=2

yes A & P are on same circle

b. Point A(5, 3); Point C(3,1); Point P(3, –1)

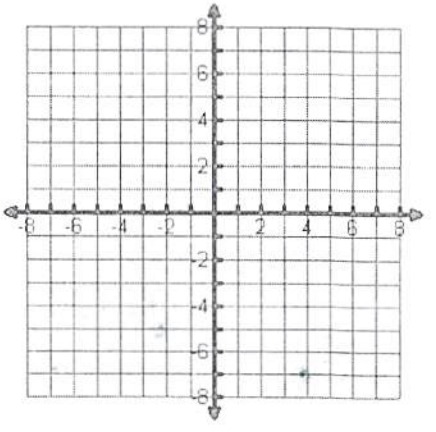


C to P: r=2

C to A: r=2.8

No A & P are not on the same circle

c. Point A(3, 2); Point C(– 1, – 1); Point P(4, –1)



C to P: r=5

C to A: d=5

yes P & A are on the same circle.

Distance and Pythagorean Theorem Mixed Review

1. If a map was placed on a coordinate grid, Atlanta is located at (200, 275) and Orlando is located at (-109, – 34) where each box represents one mile.

a) How many miles would a train travel if it goes in a straight line from Atlanta to Orlando?

$d = \sqrt{(200+109)^2+(275+34)^2}$

d = 437 miles

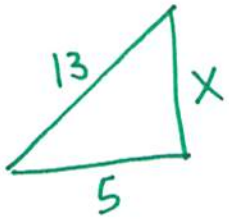
b) If the train is traveling at a speed of 240 miles per 4 hours, how long will it take the train to reach Orlando?

About 7 ½ hours

$\frac{437 \text{ miles}}{240 \text{ miles}} \mid \frac{4 \text{ hr}}{} = 7.28$

$\frac{437 \text{ miles}}{60 \text{ mph}} = 7.28$

2. A 13 feet ladder is placed 5 feet away from the base of the wall. Find the distance the ladder will reach on the wall. If the wall is 14 feet high will the ladder ever reach the top?



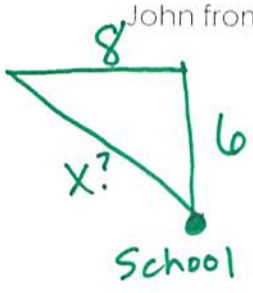
$13^2 = 5^2 + x^2$

$169 = 25 + x^2$

$144 = x^2 \quad x = 12$

The ladder will reach 12 feet on the wall. If the wall is 14 ft it will never reach the top.

3. John leaves school to go home. He walks 6 blocks North and then 8 blocks west. How far is John from the school?



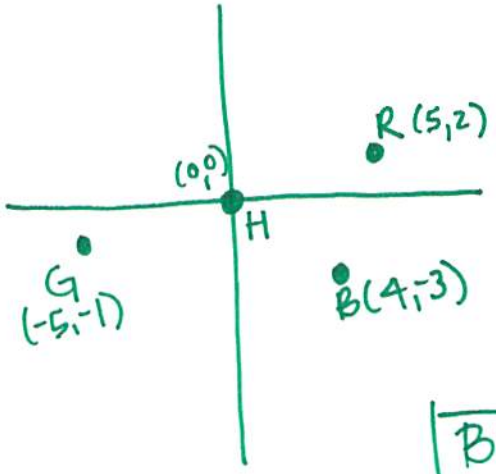
$6^2 + 8^2 = x^2$

$36 + 64 = x^2$

$100 = x^2$

X = 10 blocks

4. There are 3 balls on the green of a golf course. If the red ball is located at (5,2), the blue ball is at (4, – 3), and the green ball is located at (– 5, – 1). If the hole is located at the origin of the graph which ball is closest to the hole?



Red: $d = \sqrt{(5-0)^2+(2-0)^2}$

$d = 5.39$

Blue: $d = \sqrt{(4-0)^2+(-3-0)^2}$

$d = 5$

Green: $d = \sqrt{(-5-0)^2+(-1-0)^2}$

$d = 5.10$

Blue is closest