October 6, 2015

EQ: How are the distance formula and the Pythagorean Theorem related?

MCC8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

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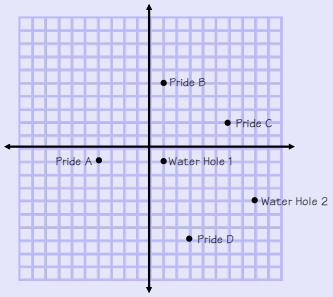
Homework Answers

1. a. 5000 ft.

1. b. 6000 ft.

1. c. 5830 ft.

1. d. 6320 ft.



2. a. 12370 ft. Pride A: Water Hole 1

2. b. 11400 ft. Pride B: Water Hole 1

2. c. 6320 ft. Pride C: Water Hole 1

2. d. 5830 ft. Pride D: Water Hole 2

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Ticket Time!

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If you do not have a graph, how can you determine the distance?

Use the distance formula $d=\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

The distance formula is based on Pythagorean Theorem.

Guided Example:

Determine the distance between the points (-2, 5) and (4, 10).

$$d=\sqrt{(4--2)^2+(10-5)^2}$$

$$d=\sqrt{(6)^2+(5)^2}$$

$$d=\sqrt{36+25}$$

$$d=\sqrt{61}$$

$$d=7.8$$

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You Try!

Find the following distances:

1. (4, 2) and (5, 0)

2. (-1, 1) and (-3, 4)

3. (-4, 5) and (1, 5)

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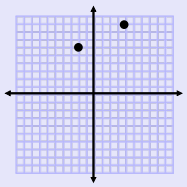
4. Using Pythagorean Theorem, find the distance between the two points. Prove the distance using the distance formula.



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Homework:

Complete the Worksheet

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