Pythagorean Theorem Word Problems

Solve by drawing a picture & using the Pythagorean Theorem. Show organized work & round to nearest 10^{th}.

name_____ per.__date_____

1. The foot of a ladder is placed 6 feet from a wall. If the top of the ladder rests 8 feet up on the wall, how long is the ladder?

2. The bottom of a ladder must be placed 3 ft. from a wall. The ladder is 12 feet long. How far above the ground does the ladder touch the wall?

3. A ramp is placed from the road to a truck tailgate 3 ft. high. If the length of the ramp is 12 ft., how far away is the bottom of the ramp from the tailgate?

4. A baseball diamond is a square with sides of 90 feet. What is the shortest distance, to the nearest tenth of a foot, between first base and third base? *challenge: show answer in ft. & in. (ex. 45'7")

5. Ed's TV screen is 51 inches wide & the diagonal measures 58 inches. What's the height of his TV?

6. An isosceles triangle has congruent sides of 20 cm. The base is 10 cm. Find the height of the triangle.

7. Two joggers run 8 miles north and then 5 miles west. What is the shortest distance, to the nearest tenth of a mile, they must travel to return to their starting point?

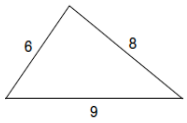
8. Jill's front door is 42" wide and 84" tall. She purchased a circular table that is 96 inches in diameter. Will the table fit through the front door? **Explain.**

9. In the Old West, settlers often fashioned tents out of a piece of cloth thrown over tent poles and then secured to the ground with stakes forming an isosceles triangle. How long would the cloth have to be so that the opening of the tent was 4 meters high and 3 meters wide?

Pythagorean Theorem Practice

Use the Theorem to determine if these are right Δs.

1)



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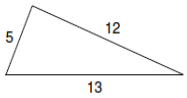

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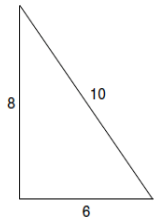

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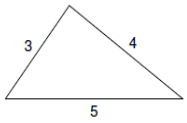
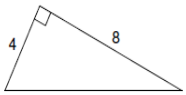


Find each missing length to the nearest tenth.

7)



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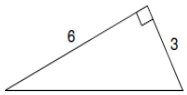

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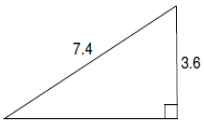

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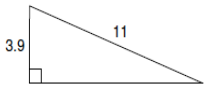

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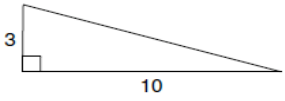

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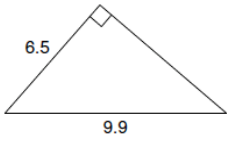


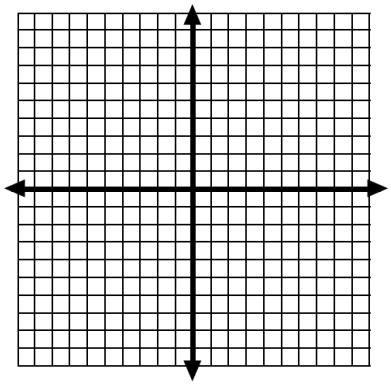
Distance between Points Practice

Find the distance between the following points using the Pythagorean Theorem. Round to nearest 100th.

1. (2,5) & (8, 8)

2. (-8, 7) & (-6, 1)

3. (-6, -10) & (-1, 1)



4. (-4, 2) & (6, -2)

5. (-8, -7) & (-6, -2)

10

6. (8, 10) & (-1, 5)