Pythagorean Theorem Word Problems

Use Pythagorean theorem to the following word problems. Give your answers correct to 2 decimal places.

1. Carl walked 4 m west and 5 m south. Draw the path taken by Carl and calculate how far he is from his starting point?

2. Martha's house is 20 m long and 18 m wide. How long is the diagonal of the house

3. A ladder is standing on horizontal ground and rests against a vertical wall. The ladder is 5.5 m long and its foot is 3 m from the wall. Calculate how far up the wall the ladder will reach.

4. Town A is 65 km due north of town B. Town C is 44 km due east of town B. Calculate the distance from town A to town C.

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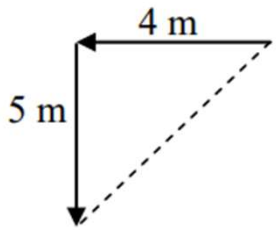

$$\text{Distance} = \sqrt{4^2 + 5^2} = 6.40\,\text{m}$$

2. Martha's house is 20 m long and 18 m wide. How long is the diagonal of the house

$$\text{Diagonal} = \sqrt{20^2 + 18^2} = 26.91\ \text{m}$$

3. A ladder is standing on horizontal ground and rests against a vertical wall. The ladder is 5.5 m long and its foot is 3 m from the wall. Calculate how far up the wall the ladder will reach.

$$\text{Distance} = \sqrt{5.5^2 - 3^2} = 4.61\ \text{m}$$

4. Town A is 65 km due north of town B. Town C is 44 km due east of town B. Calculate the distance from town A to town C.

$$\text{Distance} = \sqrt{44^2 + 65^2} = 78.49\ \text{km}$$