

Name : \_\_\_\_\_

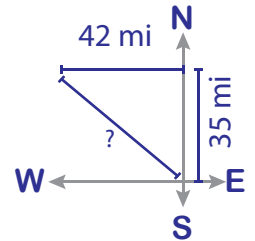
Score : \_\_\_\_\_

## Pythagorean Theorem

Level 1: S1

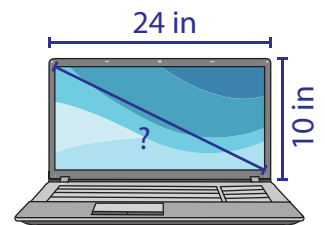
Solve the word problems. Round the answer to the nearest tenth.

- 1) Mark is on his way home from work. He drives 35 miles due North and then 42 miles due West. Find the shortest distance he can cover to reach home early.



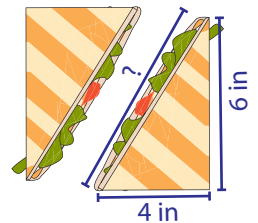
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- 2) Joshua won a laptop in a school raffle. The laptop screen measures 10 inches in height and 24 inches in width. Find the diagonal length of the laptop screen.



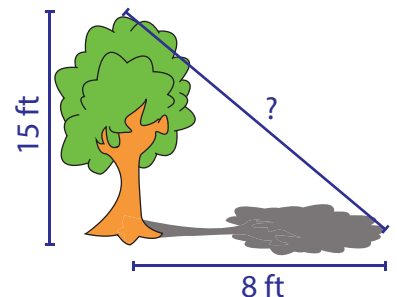
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- 3) Joey made a sandwich that was 4 inches long and 6 inches high. If he cuts the sandwich in half as shown in the figure, what would be the diagonal length of the sandwich?



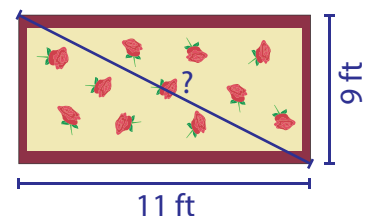
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- 4) A 15 feet tree casts a shadow that is 8 feet long. What is the distance from the tip of the tree to the tip of its shadow?



\_\_\_\_\_

- 5) Rachel bought a rug for her apartment. The rug is 11 feet long and 9 feet wide. Find the diagonal length of the rug.



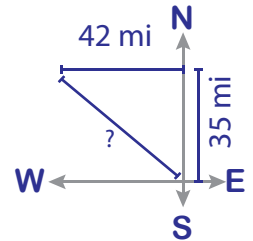
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**Pythagorean Theorem**

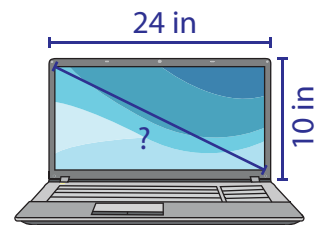
Level 1: S1

Solve the word problems. Round the answer to the nearest tenth.

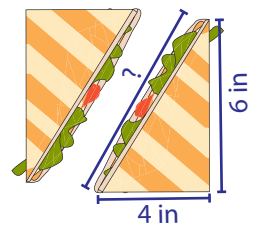
- 1) Mark is on his way home from work. He drives 35 miles due North and then 42 miles due West. Find the shortest distance he can cover to reach home early.

**54.7 mi**

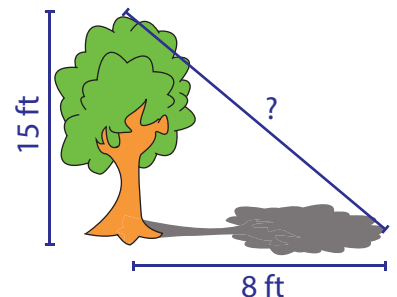
- 2) Joshua won a laptop in a school raffle. The laptop screen measures 10 inches in height and 24 inches in width. Find the diagonal length of the laptop screen.

**26 in**

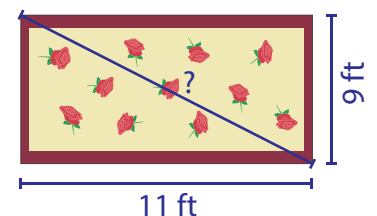
- 3) Joey made a sandwich that was 4 inches long and 6 inches high. If he cuts the sandwich in half as shown in the figure, what would be the diagonal length of the sandwich?

**7.2 in**

- 4) A 15 feet tree casts a shadow that is 8 feet long. What is the distance from the tip of the tree to the tip of its shadow?

**17 ft**

- 5) Rachel bought a rug for her apartment. The rug is 11 feet long and 9 feet wide. Find the diagonal length of the rug.

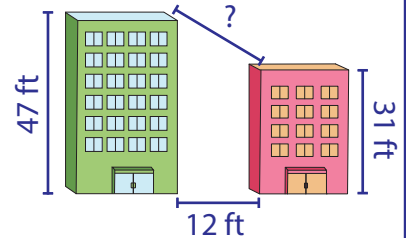
**14.2 ft**

**Pythagorean Theorem**

Level 1: S2

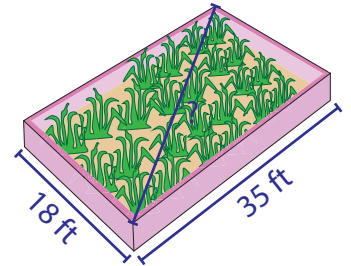
Solve the word problems. Round the answer to the nearest tenth.

- 1) There are two buildings beside each other that are 47 feet and 31 feet high. The buildings are 12 feet apart. What is the distance between the rooftops of the buildings?



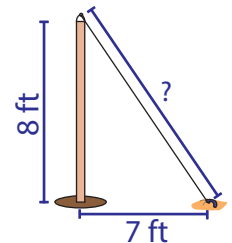
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- 2) Mr. Richard owns an orchard that has a rectangular fence. The orchard is 35 feet long and 18 feet wide. If he walks across the diagonal length of the orchard, how much distance would he cover?



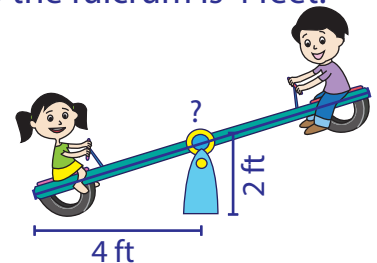
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- 3) Carol pitches a tent at a Girl Scout camp. She ties a rope from the tip of the pole to the peg nailed into the ground, as shown. The pole is 8 feet high and the distance between the base of the pole and the peg is 7 feet. Determine the length of the rope.



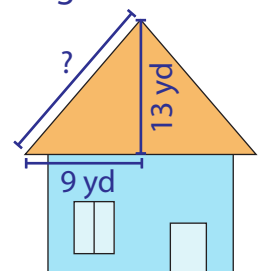
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- 4) Ross and Monica are playing on a seesaw. Monica's seat is grounded. The height of the fulcrum is 2 feet. The distance from grounded end of the seesaw to the fulcrum is 4 feet. What is the length of the seesaw?



\_\_\_\_\_

- 5) The roof rafter of a house has been raised to a height of 13 yards at the ridge. Half the length of the run measures 9 yards. Find the length of the rafter?



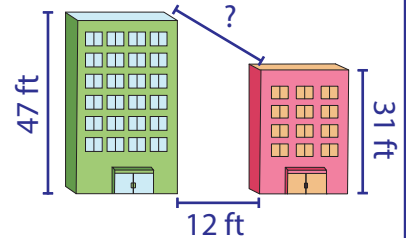
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**Pythagorean Theorem**

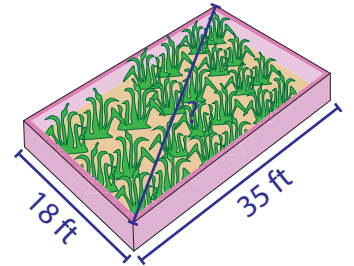
Level 1: S2

Solve the word problems. Round the answer to the nearest tenth.

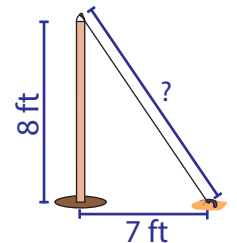
- 1) There are two buildings beside each other that are 47 feet and 31 feet high. The buildings are 12 feet apart. What is the distance between the rooftops of the buildings?

**20 ft**

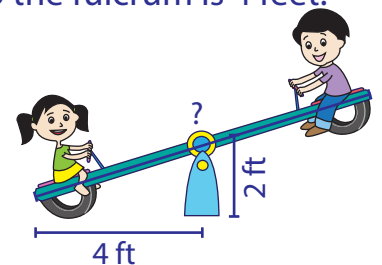
- 2) Mr. Richard owns an orchard that has a rectangular fence. The orchard is 35 feet long and 18 feet wide. If he walks across the diagonal length of the orchard, how much distance would he cover?

**39.4 ft**

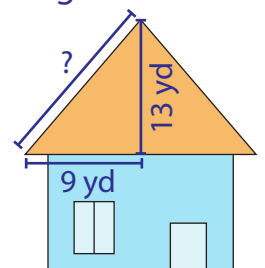
- 3) Carol pitches a tent at a Girl Scout camp. She ties a rope from the tip of the pole to the peg nailed into the ground, as shown. The pole is 8 feet high and the distance between the base of the pole and the peg is 7 feet. Determine the length of the rope.

**10.6 ft**

- 4) Ross and Monica are playing on a seesaw. Monica's seat is grounded. The height of the fulcrum is 2 feet. The distance from grounded end of the seesaw to the fulcrum is 4 feet. What is the length of the seesaw?

**9 ft**

- 5) The roof rafter of a house has been raised to a height of 13 yards at the ridge. Half the length of the run measures 9 yards. Find the length of the rafter?

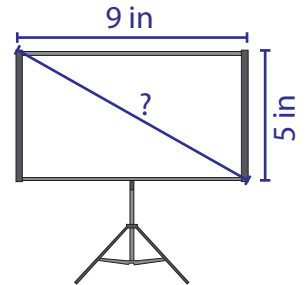
**15.8 yd**

**Pythagorean Theorem**

Level 1: S3

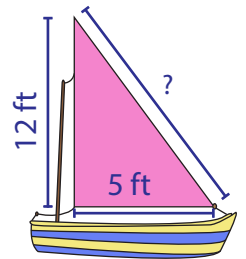
Solve the word problems. Round the answer to the nearest tenth.

- 1) John won a tripod projector screen in a lucky draw. The screen is 9 inches long and 5 inches wide. What is the diagonal length of the projector screen?



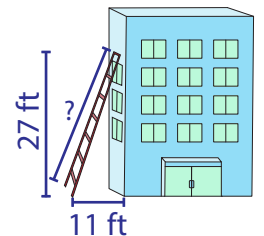
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- 2) The mast of a sailboat is 12 feet high. A sturdy rope that supports the mast to the deck is 5 feet away from the base of the mast. Determine the length of the rope.



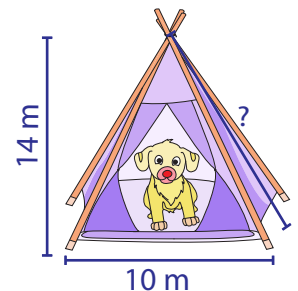
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- 3) Ben propped a ladder against the wall of a building. The distance between the base of the building and the foot of the ladder is 11 feet. The top of the ladder touches the wall at a height of 27 feet. What is the length of the ladder?



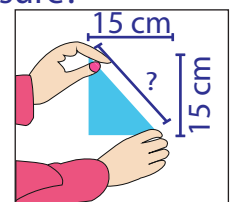
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- 4) Sandra built a dog house in the shape of a tent. The ridge is 14 meters high and the base of the tent is 10 meters wide. Find the slant height of the tent.



\_\_\_\_\_

- 5) Anne was given a sheet of paper during her math class. She was asked to fold the paper, so as to get the adjacent sides to meet, as shown in the figure. The paper is 15 cm long and 15 cm wide. How much would the diagonal edge of the paper measure?



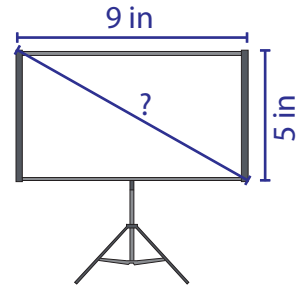
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**Pythagorean Theorem**

Level 1: S3

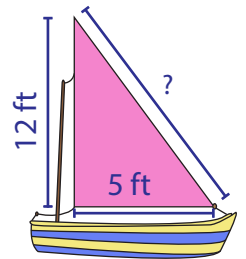
Solve the word problems. Round the answer to the nearest tenth.

- 1) John won a tripod projector screen in a lucky draw. The screen is 9 inches long and 5 inches wide. What is the diagonal length of the projector screen?



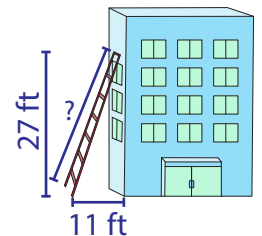
**10.3 in**

- 2) The mast of a sailboat is 12 feet high. A sturdy rope that supports the mast to the deck is 5 feet away from the base of the mast. Determine the length of the rope.



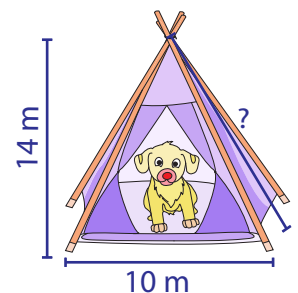
**13 ft**

- 3) Ben propped a ladder against the wall of a building. The distance between the base of the building and the foot of the ladder is 11 feet. The top of the ladder touches the wall at a height of 27 feet. What is the length of the ladder?



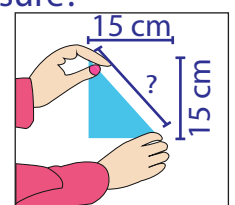
**29.2 ft**

- 4) Sandra built a dog house in the shape of a tent. The ridge is 14 meters high and the base of the tent is 10 meters wide. Find the slant height of the tent.



**14.9 m**

- 5) Anne was given a sheet of paper during her math class. She was asked to fold the paper, so as to get the adjacent sides to meet, as shown in the figure. The paper is 15 cm long and 15 cm wide. How much would the diagonal edge of the paper measure?



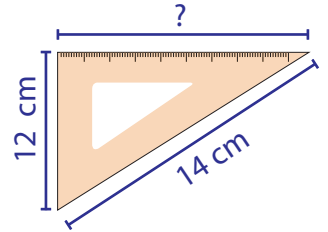
**21.2 cm**

**Pythagorean Theorem**

Level 2: S1

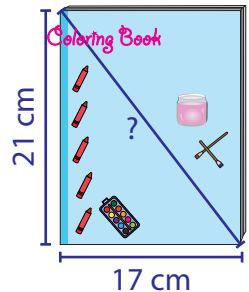
Solve the word problems. Round the answer to the nearest tenth.

- 1) Ruth develops a blueprint with the help of a triangle. The longest side of the instrument measures 14 cm and one of the sides measures 12 cm. Determine the length of the other side of the instrument?



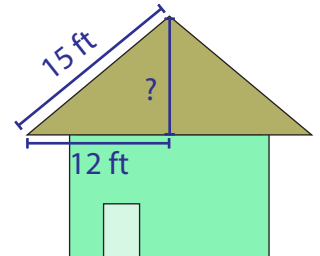
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- 2) Carol bought a coloring book. It is 21 cm long and 17 cm wide. What is the diagonal length of the book?



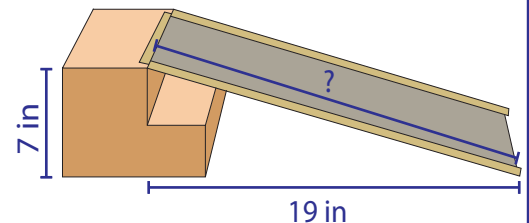
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- 3) The slope of the rafter is 15 feet. Half the run of the rafter measures 12 feet. Find the height of the ridge from the base?



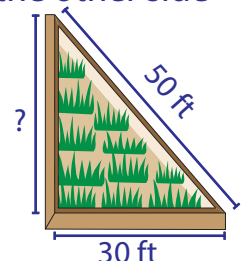
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- 4) A ramp is elevated to a height of 7 inches from the base. The horizontal distance between the lower end of the ramp and the base is 19 inches, as shown in the figure. What is the length of the ramp?



\_\_\_\_\_

- 5) Ashley has a right triangular garden in her backyard. The longest side of the garden measures 50 feet. One of the sides is 30 feet long. Find the length of the other side of the garden.



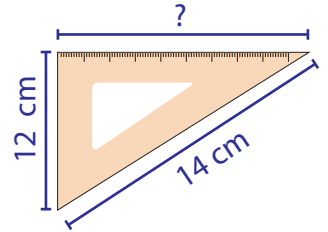
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**Pythagorean Theorem**

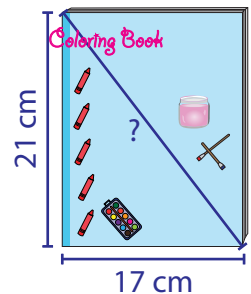
Level 2: S1

Solve the word problems. Round the answer to the nearest tenth.

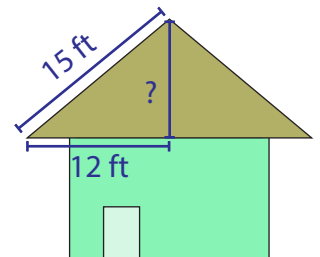
- 1) Ruth develops a blueprint with the help of a triangle. The longest side of the instrument measures 14 cm and one of the sides measures 12 cm. Determine the length of the other side of the instrument?

**7.2 cm**

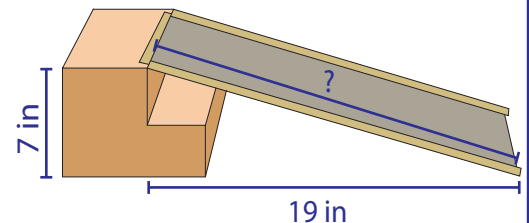
- 2) Carol bought a coloring book. It is 21 cm long and 17 cm wide. What is the diagonal length of the book?

**27 cm**

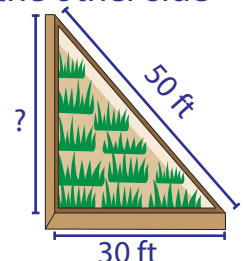
- 3) The slope of the rafter is 15 feet. Half the run of the rafter measures 12 feet. Find the height of the ridge from the base?

**9 ft**

- 4) A ramp is elevated to a height of 7 inches from the base. The horizontal distance between the lower end of the ramp and the base is 19 inches, as shown in the figure. What is the length of the ramp?

**20.2 in**

- 5) Ashley has a right triangular garden in her backyard. The longest side of the garden measures 50 feet. One of the sides is 30 feet long. Find the length of the other side of the garden.

**40 ft**

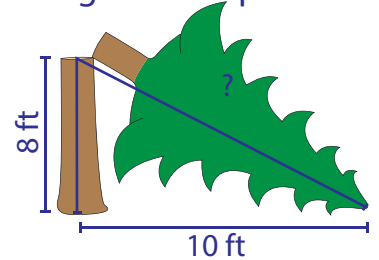


**Pythagorean Theorem**

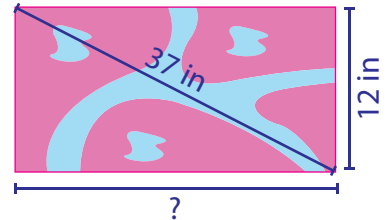
Level 2: S2

Solve the word problems. Round the answer to the nearest tenth.

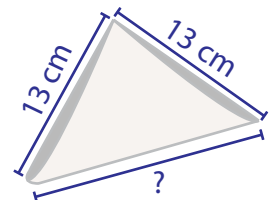
- 1) A tree is axed 8 feet above its base. When the tree fell to the ground, the tip of the tree lay 10 feet away from its base, as shown in the figure. Determine the length of the part of the tree that was axed?



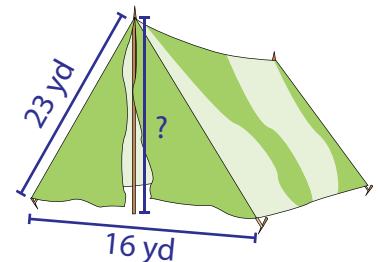
- 2) Brenda bought a carpet for her apartment. The diagonal length of the carpet is 37 inches and the width is 12 inches. Find the length of the carpet.



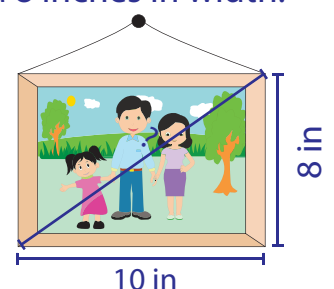
- 3) A napkin is folded in the shape of a right triangle, so as to get the adjacent sides to meet as shown in the figure. The napkin measures 13 cm in length and in width. Determine the diagonal length of the napkin.



- 4) Mike pitches a ridge tent. The tent is 16 yards wide and the slope of the tent measures 23 yards. What is the height of the tent?



- 5) Paul bought a photo frame which measured 10 inches in length and 8 inches in width. Determine the diagonal length of the photo frame.

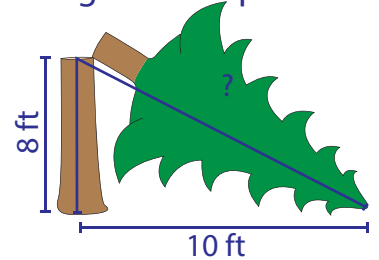


**Pythagorean Theorem**

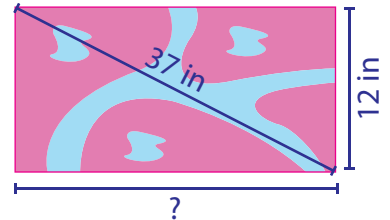
Level 2: S2

Solve the word problems. Round the answer to the nearest tenth.

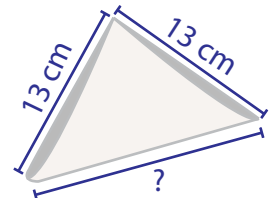
- 1) A tree is axed 8 feet above its base. When the tree fell to the ground, the tip of the tree lay 10 feet away from its base, as shown in the figure. Determine the length of the part of the tree that was axed?

**12.8 ft**

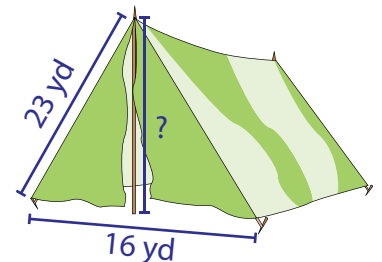
- 2) Brenda bought a carpet for her apartment. The diagonal length of the carpet is 37 inches and the width is 12 inches. Find the length of the carpet.

**35 in**

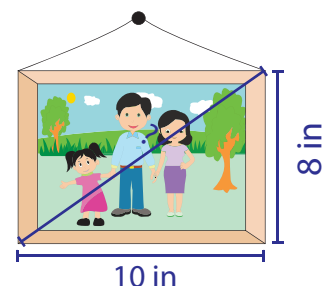
- 3) A napkin is folded in the shape of a right triangle, so as to get the adjacent sides to meet as shown in the figure. The napkin measures 13 cm in length and in width. Determine the diagonal length of the napkin.

**18.4 cm**

- 4) Mike pitches a ridge tent. The tent is 16 yards wide and the slope of the tent measures 23 yards. What is the height of the tent?

**21.6 yd**

- 5) Paul bought a photo frame which measured 10 inches in length and 8 inches in width. Determine the diagonal length of the photo frame.

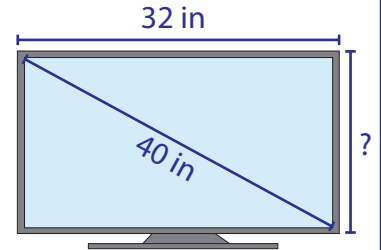
**12.8 in**

**Pythagorean Theorem**

Level 2: S3

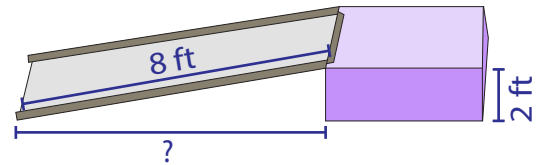
Solve the word problems. Round the answer to the nearest tenth.

- 1) Rebecca bought an LED television set that is 32 inches long. The diagonal length measures 40 inches. What is the width of the television screen?



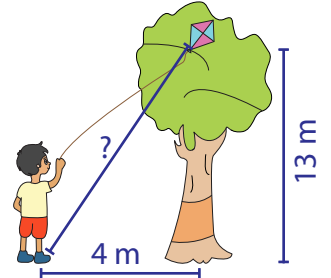
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- 2) A ramp is elevated to a height of 2 feet. The length of the ramp is 8 feet. What is the horizontal distance between the lower end of the ramp and the base?



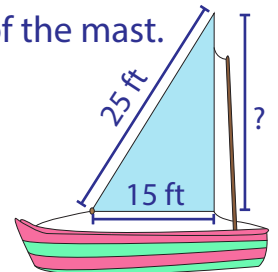
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- 3) Daniel was flying a kite and it suddenly got tangled in a branch of a tree. The tree is 13 meters high. Daniel is standing 4 meters away from the base of the tree. Find the distance between the kite and Daniel's position on the ground.



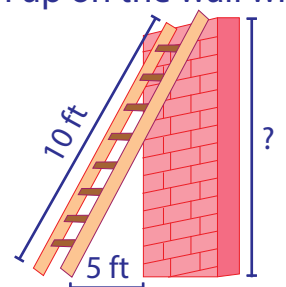
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- 4) The mast of a sailboat is supported by a sturdy rope. The rope extends from the tip of the mast to the deck and measures 25 feet. The lower end of the rope that is attached to the deck is 15 feet away from the base of the mast. Determine the height of the mast.



\_\_\_\_\_

- 5) Paul propped a ladder against a wall which measures 10 feet. How high up on the wall will the ladder reach if the foot of the ladder is 5 feet away from the wall?



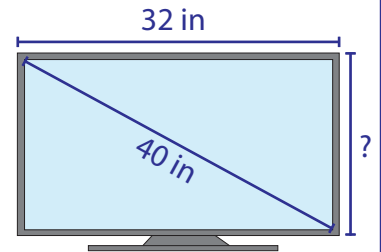
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**Pythagorean Theorem**

Level 2: S3

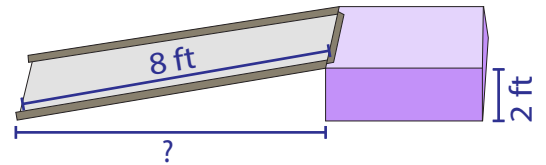
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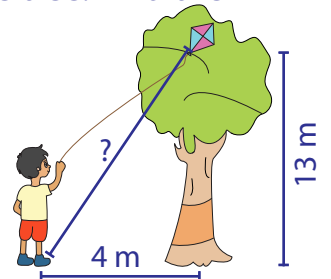
**24 in**

- 2) A ramp is elevated to a height of 2 feet. The length of the ramp is 8 feet. What is the horizontal distance between the lower end of the ramp and the base?



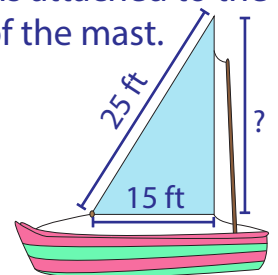
**7.7 ft**

- 3) Daniel was flying a kite and it suddenly got tangled in a branch of a tree. The tree is 13 meters high. Daniel is standing 4 meters away from the base of the tree. Find the distance between the kite and Daniel's position on the ground.



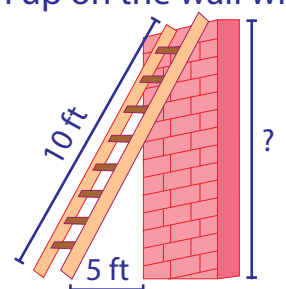
**13.6 m**

- 4) The mast of a sailboat is supported by a sturdy rope. The rope extends from the tip of the mast to the deck and measures 25 feet. The lower end of the rope that is attached to the deck is 15 feet away from the base of the mast. Determine the height of the mast.



**20 ft**

- 5) Paul propped a ladder against a wall which measures 10 feet. How high up on the wall will the ladder reach if the foot of the ladder is 5 feet away from the wall?



**8.7 ft**