

Section A: Multiple Choice/ Fill in the blank [1 mark per answer]
 Write the correct letter or answer in the space provided.

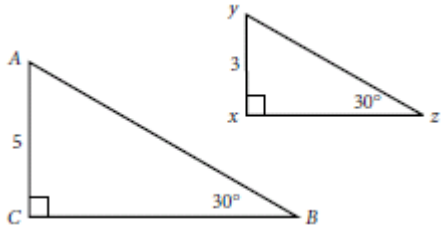
Questions

Answers

1. If $\triangle ABC \sim \triangle XYZ$, which of the following is true?
 a. $\frac{AB}{XY} = \frac{BC}{YZ}$ b. $\frac{AC}{XY} = \frac{BC}{YZ}$ c. $\frac{BC}{XY} = \frac{AB}{YZ}$ d. $\frac{AC}{XZ} = \frac{BC}{XY}$

Answer:

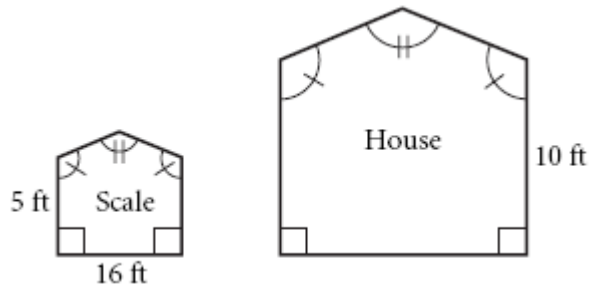
2. The two triangles below are similar. If $YZ = 6$, then $AB =$ _____
 a. 2.5 b. 6 c. 10 d. 18



Answer:

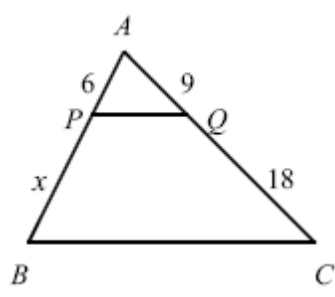
3. The scale model of the side of a house has the dimensions shown below. What is the length of the actual building?

- a. 31.25 feet b. 32 feet
- c. 35 feet d. 51.2 feet



Answer:

4. Given that $\overline{PQ} \parallel \overline{BC}$, use the side-splitting theorem to write and solve an equation to find x .

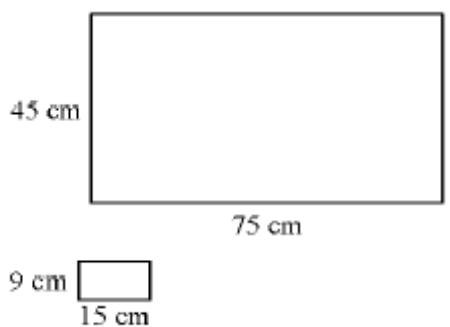


- a. 6 b. 12
- c. 18 d. 24

Answer:

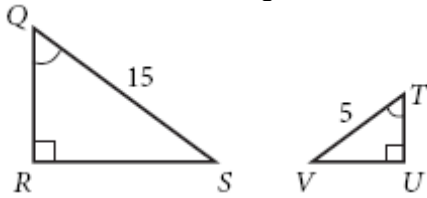
5. Which statement is true about the following pair of rectangles?

- a. They are not similar because $\frac{9}{75} \neq \frac{45}{15}$
- b. They are not similar because $\frac{75}{9} = \frac{25}{3}$
- c. They are similar because $\frac{9}{15} = \frac{45}{75}$
- d. They are similar because $\frac{9}{75} = \frac{15}{45}$



Answer:

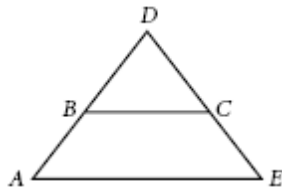
6. Which of the following statements is true about the triangles below?



- (A) $\triangle QRS \sim \triangle TUV$ by AA.
- (B) $\triangle QRS \sim \triangle TUV$ by SSS.
- (C) $\triangle QRS \sim \triangle TUV$ by SAS.
- (D) The triangles can not be proven similar.

Answer:

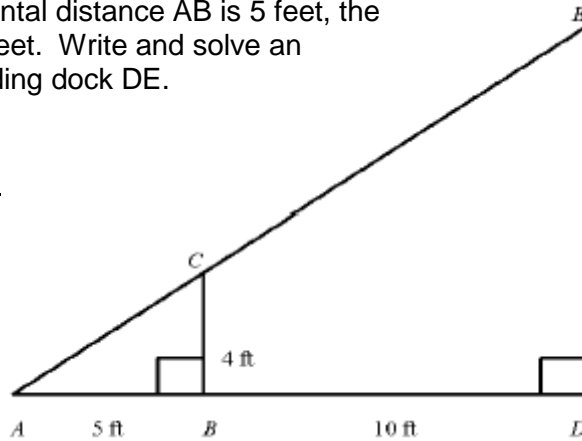
7. In the figure below, B and C are midpoints of \overline{AD} and \overline{DE} respectively. If $DC = 10$ and $BC = 12$, what is AE ?



Answer:

8. The extendable ramp shown at right is used to move crates of fruit to loading docks of different heights. When the horizontal distance AB is 5 feet, the height of the loading dock (BC) is 4 feet. Write and solve an equation to find the height of the loading dock DE . (3 marks)

Equation: _____



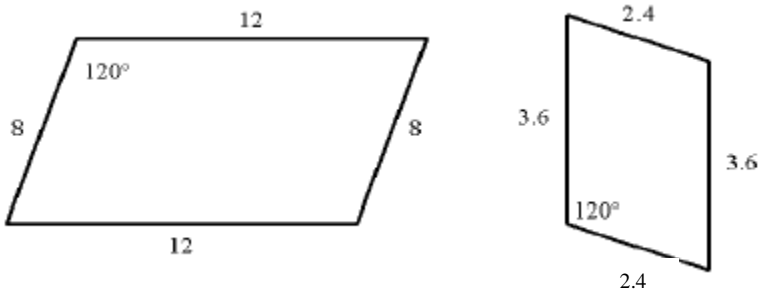
Answer:

- a. 9 feet
- b. 12 feet
- c. 8 feet
- d. 14 feet

Section B: Short Answer

9. In each question, determine whether the two figures shown can be proven similar. (6 marks)
 i) State whether the figures are similar or not similar.
 ii) Explain your answer. (Your explanations should involve numbers!)

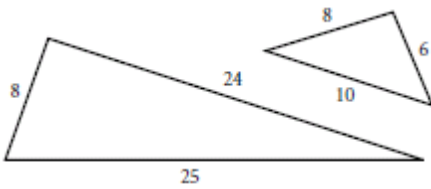
a)



i) Similar? Yes No (Circle one)

ii) Reason:

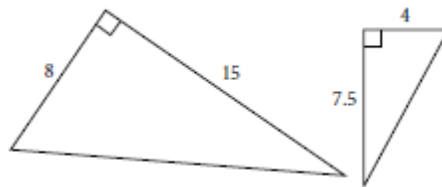
b)



i) Similar? Yes No (Circle one)

ii) Reason:

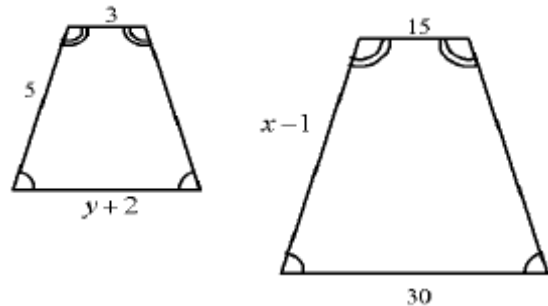
c)



i) Similar? Yes No (Circle one)

ii) Reason:

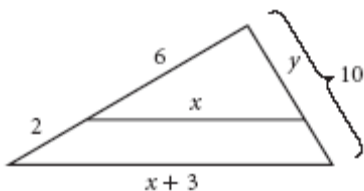
10. The polygons drawn below are similar, but not necessarily drawn to scale. Find x . (3 marks)



$x =$ _____

11. The polygons in the figures below are similar. Find x and y . Write equations and solve to find the variables. (4 marks)

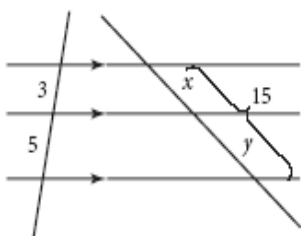
a)



$x =$ _____

$y =$ _____

b) BONUS



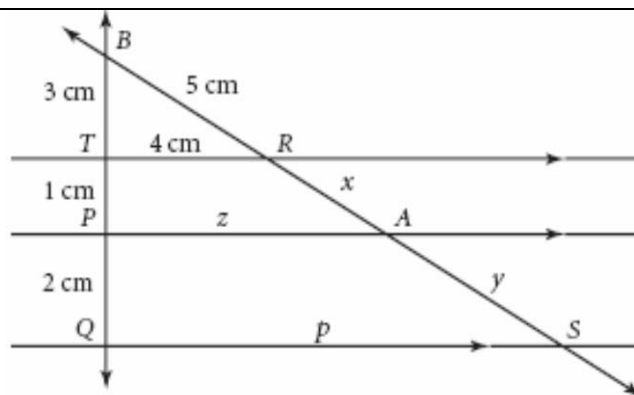
$x =$ _____

$y =$ _____

BONUS: (This used to be part of the quiz)

12. In the figure below, find x , y , z and p . In each case, write an equation and use it to find the variable. (8 marks)

Working to find x :



Working to find y :

Working to find z :

Working to find p :

$x =$ _____

$y =$ _____

$z =$ _____

$p =$ _____