

Question 1 of 9

The length of a rectangle is 3 yd more than twice the width x . The area is 275 yd^2 .

(a) Write an equation in terms of x that represents the given relationship.

(b) Solve the equation to find the dimensions of the given shape.

Part 1 of 3

(a) Write an equation in terms of x that represents the given relationship.

The equation is .

Part 2 of 3

(b) Solve the equation to find the dimensions of the given shape.

The width is yd.

Part 3 of 3

The length is yd.

Question 2 of 9

The longer leg of a right triangle is 7 cm longer than the length of the shorter leg x . The hypotenuse is 13 cm.

Part 1 of 4

(a) Write an equation in terms of x that represents the given relationship.

The equation is .

Part 2 of 4

(b) Solve the equation to find the dimensions of the given shape.

The shorter leg is cm.

Part 3 of 4

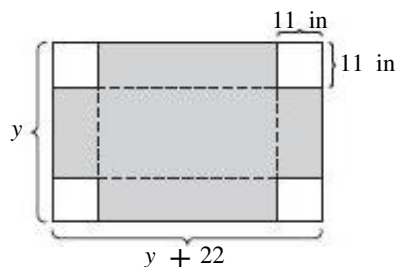
The longer leg is cm.

Part 4 of 4

The hypotenuse is cm.

Question 3 of 9

Lorene plans to make several open-topped boxes in which to carry plants. She makes the boxes from rectangular sheets of cardboard from which she cuts out 11-in squares from each corner. The length of the original piece of cardboard is 22 in more than the width. If the volume of the box is 253 in^3 , determine the dimensions of the original piece of cardboard.



The dimensions of the original piece of cardboard are in by in.

Question 4 of 9

The height of a triangular truss is 4 ft less than the base. The amount of drywall needed to cover the triangular area is 86 ft^2 . Find the base and height of the triangle. Round your answer to the nearest tenth of a foot.

Part 1 of 2

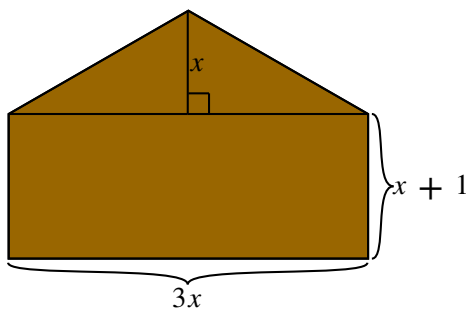
The base is approximately .

Part 2 of 2

The height is approximately .

Question 5 of 9

The front face of a house is in the shape of a rectangle with a king post roof truss above. The length of the rectangular region is 3 times the height of the truss. The height of the rectangle is 1 ft more than the height of the truss. If the total area of the front face of the house is 180 ft^2 , determine the length and height of the rectangular region. Round to the nearest foot.



The length of the rectangular region is ft.

The height of the rectangular region is ft.

Question 6 of 9

(a) Write an equation representing the fact that the sum of the squares of two consecutive integers is 113. Use x to represent the smaller integer.

(b) Solve the equation from part (a) to find the two integers. If there is more than one pair, use the "or" button.

Part 1 of 2

(a) Write an equation representing the fact that the sum of the squares of two consecutive integers is 113. Use x to represent the smaller integer.

The equation is .

Part 2 of 2

(b) Solve the equation from part (a) to find the two integers. If there is more than one pair, use the "or" button.

and

Question 7 of 9

A rectangular garden covers 160 yd^2 . The length is 4 yd longer than the width. Find the length and width.

Round your answers to the nearest tenth of a yard.

Part 1 of 2

The length is approximately .

Part 2 of 2

The width is approximately .

Question 8 of 9

The width of a rectangle is 2 m less than half of the length x . The area is 160 m^2 .

Part 1 of 3

(a) Write an equation in terms of x that represents the given relationship.

The equation is .

Part 2 of 3

(b) Solve the equation to find the dimensions of the given shape.

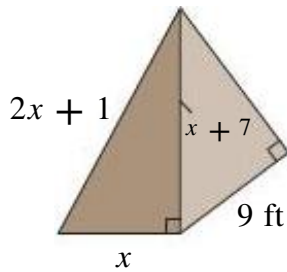
The length is m.

Part 3 of 3

The width is m.

Question 9 of 9

A portion of a roof truss is given in the figure. The triangle on the left is configured such that the longer leg is 7 ft longer than the shorter leg, and the hypotenuse is 1 ft more than twice the shorter leg.



Part 1 of 2

(a) Find the lengths of the sides of the triangle on the left. Round to the nearest foot.

The length of the shorter leg of the triangle on the left is ft.

The length of the longer leg of the triangle on the left is ft.

The length of the hypotenuse of the triangle on the left is ft.

Part 2 of 2

(b) Find the lengths of the sides of the triangle on the right. Round to the nearest square foot.

The length of the shorter leg of the triangle on the right is ft.

The length of the longer leg of the triangle on the right is ft.

The length of the hypotenuse of the triangle on the right is ft.