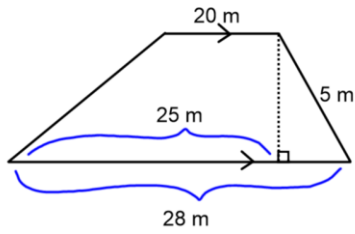
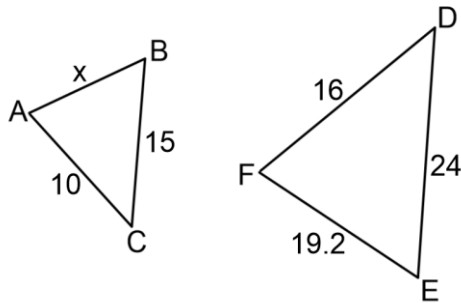


Find the area. Show all of your work.



Joe is standing 15 ft from a building. His eye height is 6 ft, and he looks up to the top of the building at a 71° angle. How tall is the building? Round only your final answer, and round it to the nearest hundredth. Draw a diagram and show all of your work.

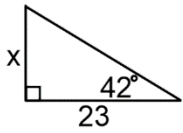
$\triangle ABC \sim \triangle FED$. Write and solve an equation to find the value of x . Show all of your work.



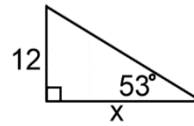
Would the following sets of side lengths make a triangle? Show all of your work.

- a. 10, 15, 25 b. 8, 9, 10 c. 12, 13, 28

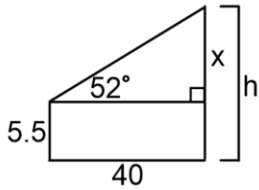
Solve for x. Show all of your work.



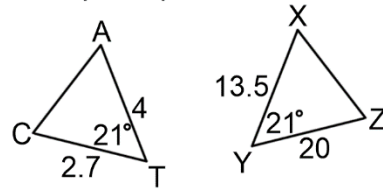
Solve for x. Show all of your work.



Solve for x and then h. Show all of your work.



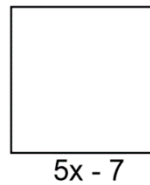
Make a complete flowchart to show that the triangles are similar. Make sure to include all of the required parts of the flowchart.



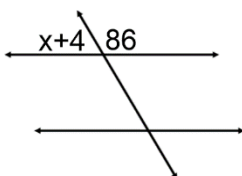
Solve for x. Show all of your work.

$$\frac{x+3}{4} = \frac{9}{15}$$

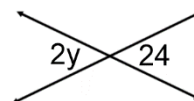
Find the area of the square.
Show all of your work.



Solve for x. Show all of your work.



Solve for y. Show all of your work.

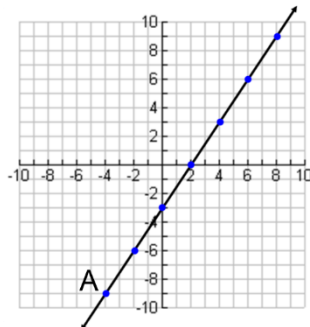


Sally's mother has two bags of candy, but she says that Sally can only have 2 pieces. Bag #1 has 70% orange candies and 30% red candies. Bag #2 has 10% orange candies, 50% white candies, and 40% green candies. Sally's eyes are covered, and she chooses one candy out of each bag. What is the probability that she picks 2 orange candies? Show all of your work, and make a complete probability area model or tree diagram to support your answer.

Solve for x. Show all of your work.

$$x^2 - 8x - 20 = 0$$

Write the equation of the line shown in the graph below. Then write the equation of a line that is perpendicular to this line, but goes through point A.



1. A rectangle has an area of 42 in^2 . The length is 11 more than the width. What are the dimensions of the rectangle?

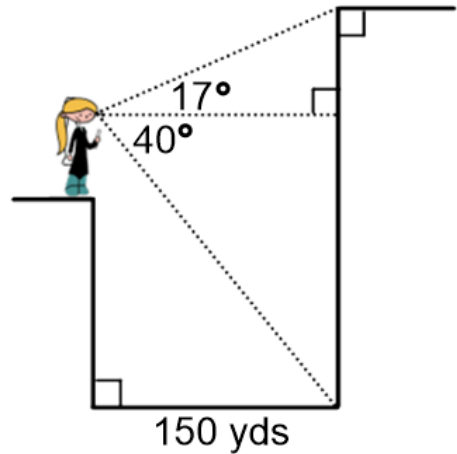
2. State whether the following sides form a triangle.

a. 2, 11, 14

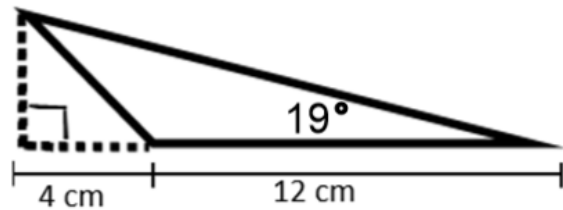
b. 16, 7, 21

c. 46, 13, 29

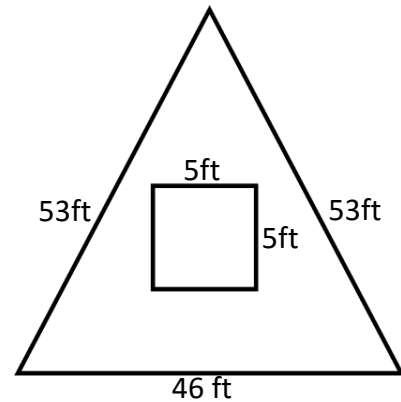
3. Kayla is standing on a bridge and looking at a mountain that is 150 yards away from her. She looks at the top of the mountain at a 17° angle, she looks down to the base of the mountain at a 40° angle. How tall is the mountain?



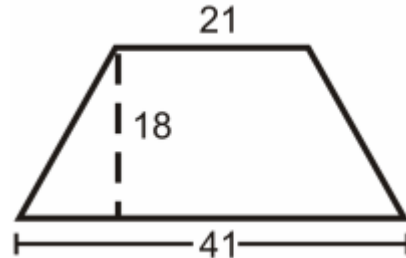
4. Find the area of the solid triangle at right.



5. Lauren is trying to fence in her yard, but there is a pond in the middle of it. She doesn't want her dog to get into the pond, so she must fence that in as well. How much fencing she will need to order? How much yard will her dog will have for play?



5. Find the area and perimeter of the following isosceles trapezoid.



6. Your favorite Geometry teacher was playing a probability game in class. Sally and Joe go at the same time and spin twice. If the spinner lands on the same letter both times, Sally wins. If it lands on different letters both times, Joe wins. The winner gets no homework for the night. Which player is more likely to win? Demonstrate your reasoning with one type of probability model.

