

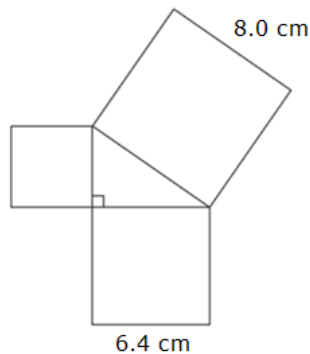


Pythagorean Theorem

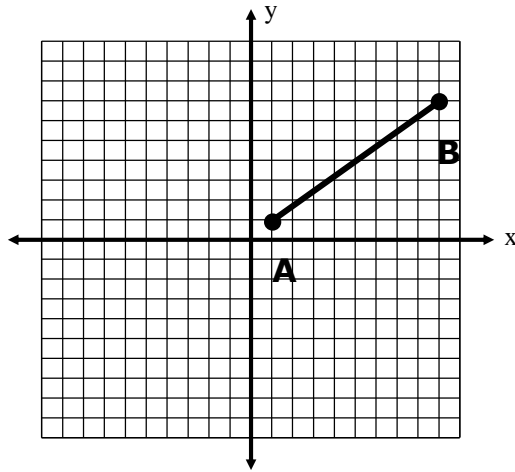
Elaborate – Answer Key

Directions: Solve each problem. Sketch a picture and record your solution.

	Answer
<p>Problem 1 Which figures best represents a triangle with sides a, b, and c in which the relationship $a^2 + b^2 = c^2$ is true?</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>I</p> </div> <div style="text-align: center;"> <p>III</p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p>II</p> </div>	<p>I and III</p>
<p>Problem 2 Write an equation that could be used to find the length of line segment m.</p> <div style="text-align: center; margin-top: 20px;"> </div>	<p>$m^2 = 11^2 + 12^2$</p>
<p>Problem 3 The drawing below shows how 3 squares can be joined at their vertices to create a right triangle. What is the area in square centimeters of the smallest square?</p>	<p>23.04 square centimeters</p>

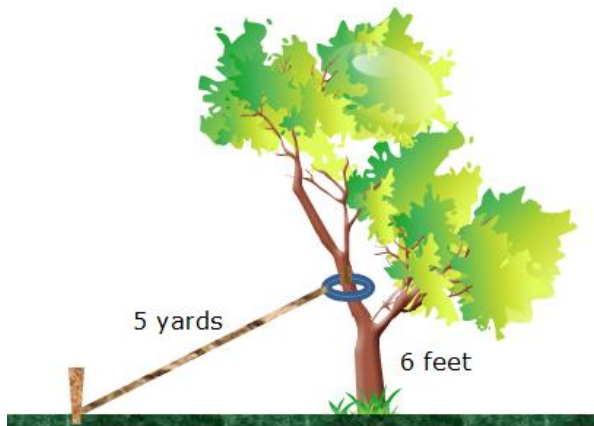


Problem 4
Find the length of segment AB.



10 units

Problem 5
A tree is staked to provide strength so that it will grow straight. A diagram of a staked tree is shown below. A ring has been placed on the tree 6 feet from the ground, and a rope will be tied to the ring and attached to the stake. Approximately how far away from the tree will the stake need to be placed to provide maximum support?



13.7 feet



Problem 6

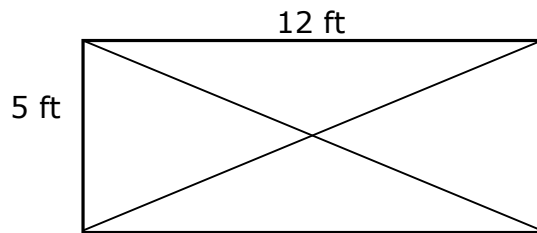
A 34-foot ladder leans against a building. The bottom of the ladder is 16 feet from the base of the building. How far up the side of the building does the ladder reach?



30 feet

Problem 7

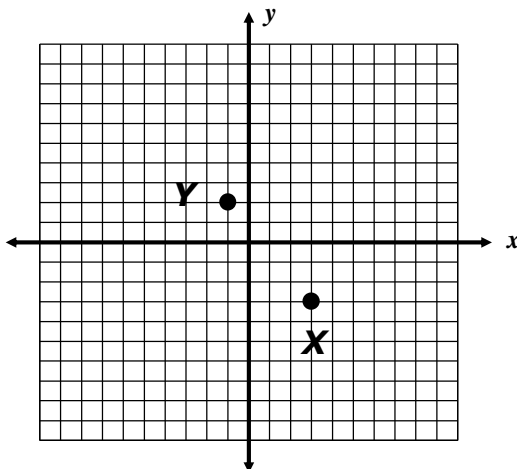
A gardener wants to divide a rectangular garden into 4 different areas along both diagonals, as shown below. If he plans to use twine to divide the garden, what is the minimum length of twine the gardener will need?



26 feet

Problem 8

What is the distance between points X and Y?



$\sqrt{41}$

