

Name _____ Date _____



Skills Maintenance

Using the Pythagorean theorem

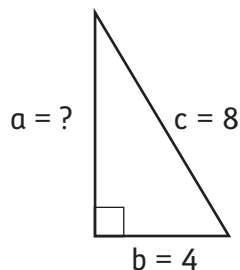
Activity 1

Use the Pythagorean theorem to find the length of the missing side for each right triangle. Round decimal numbers to the nearest tenth.

1. What is the length of side a ? _____

Show your work here.

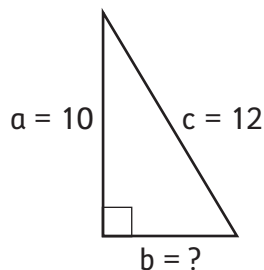
$$a^2 + b^2 = c^2$$



2. What is the length of side b ? _____

Show your work here.

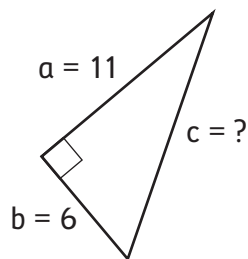
$$a^2 + b^2 = c^2$$



3. What is the length of side c ? _____

Show your work here.

$$a^2 + b^2 = c^2$$



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 **Problem-Solving Activity**
Non-Linear Functions

Create x/y tables for each of the non-linear functions. You may use a calculator.

1. $y = x^2 + 1$

x	y

2. $y = x^3$

x	y

3. $y = x^4$

x	y

4. $y = x^2 - 1$

x	y

5. $y = x^3 - 1$

x	y

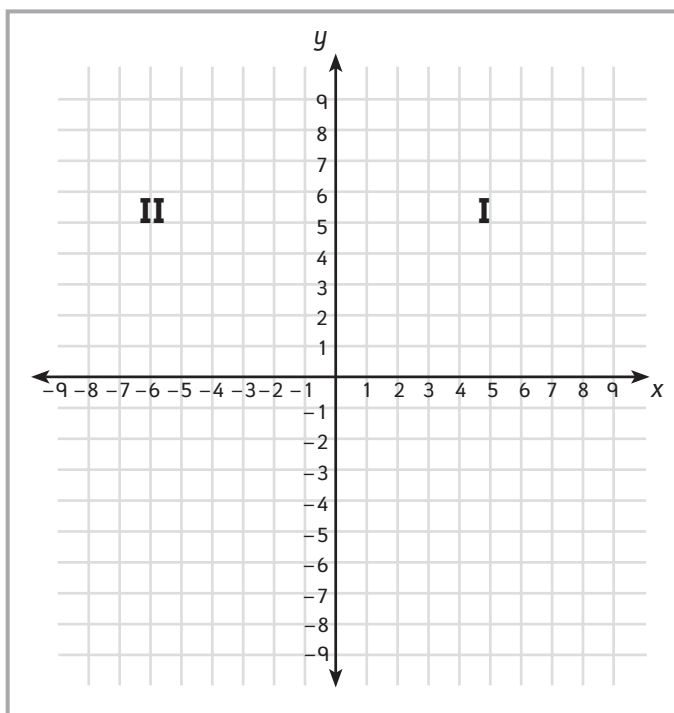
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 **Problem-Solving Activity**
Non-Linear Functions

Create a table and graph for the function $y = x^2$. Notice that the x/y table includes negative values for x . The graph you are making will result in a line that is not straight. Once you finish the graph, explain why the line curves up in Quadrant II. Use information from the function and the table to explain why the function is U-shaped.

$y = x^2$

x	y
-3	
-2	
-1	
0	
1	
2	
3	



1. What do you notice about the y -values for the x -values -3 and 3 ?

2. Explain in your own words why the graph of this function is curved.

 **Reinforce Understanding**
Use the mBook *Study Guide* to review lesson concepts.