STATION 1

Use the word bank to fill in each of the blanks in the paragraph below.

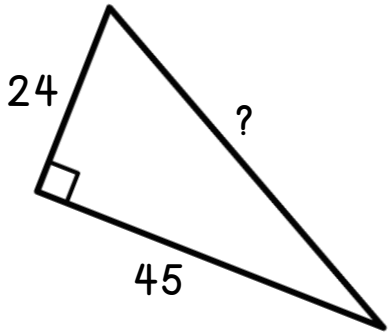
C	SQUARE	A	RIGHT	B
SUM	90°	HYPOTENUSE	LEGS	THEOREM

The Pythagorean _____(1) tells us how the side lengths of _____(2) triangles are related. In any right triangle, the _____(3) of the squares of the two _____(4) should equal the _____(5) of the hypotenuse. The legs are called _____(6) and _____(7), and the hypotenuse is _____(8). The _____(9) is always the longest side of a right triangle, and its across from the _____(10) angle.

STATION 2

Find the missing side length of each right triangle. Round to the nearest tenth when necessary.

1



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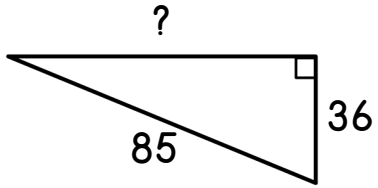

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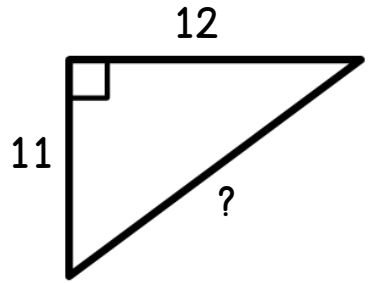

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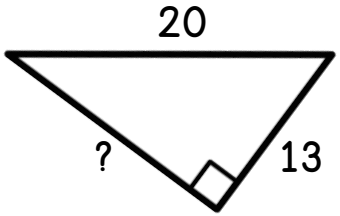

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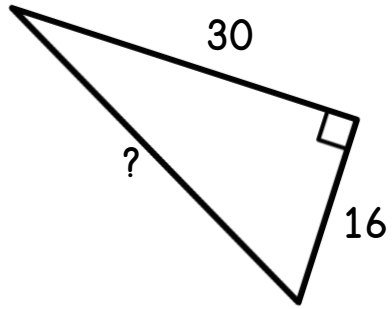

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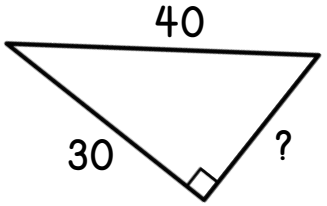
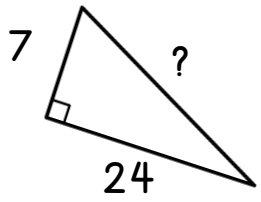
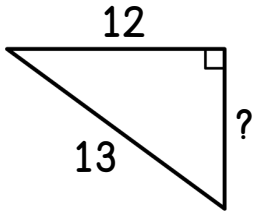
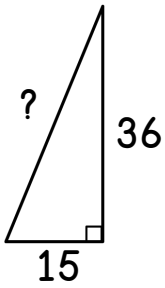


STATION 3

In each of the three problems below, a mistake was made when trying to find the missing length of the right triangle. Find and explain the mistake in the work, and then correct the solution.

	1	2	3
PROBLEM			
WORK	$7^2 + 24^2 = c^2$ $49 + 576 = c^2$ $625 = c^2$ $c = 625$	$12^2 + 13^2 = c^2$ $144 + 169 = c^2$ $313 = c^2$ $c = 17.7$	$15^2 + 36^2 = c^2$ $30 + 72 = c^2$ $102 = c^2$ $c = 10.1$
SOLUTION	The missing side length is 625 units.	The missing side length is 17.7 units.	The missing side length is 10.1 units.

STATION 4

State whether each description of a triangle is a right triangle or not. Justify your answers.

1. Veronica cut a triangular piece of cookie cake with side lengths that measure 3.6 cm, 6 cm and 4.8 cm.

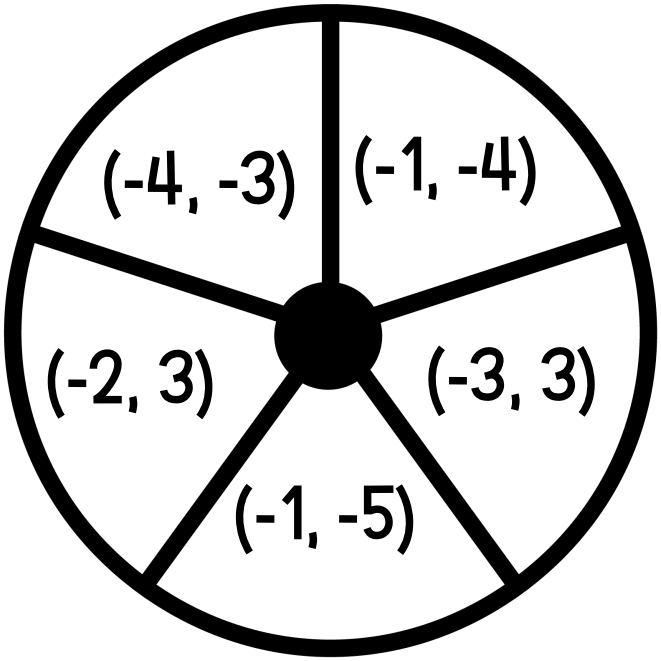
2. The table top of a side table is triangular shaped with side lengths of 12 inches, 22.5 inches and 25.5 inches.

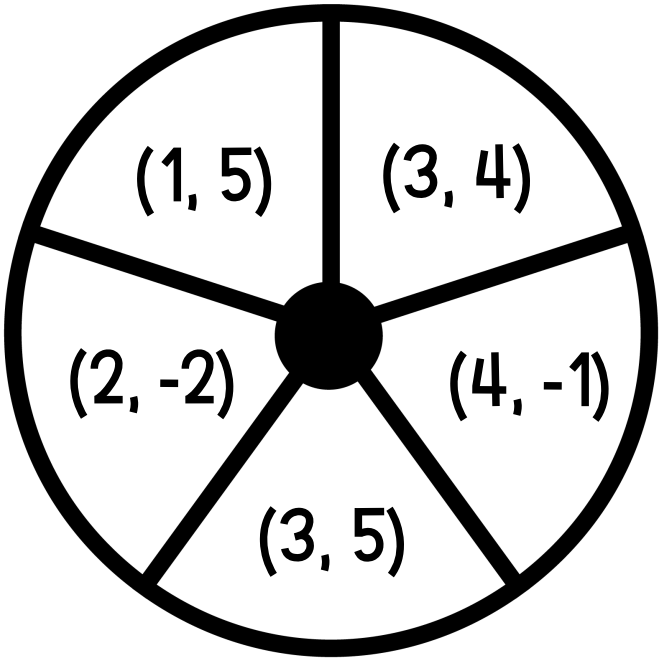
3. Tony uses a triangular shaped guitar pick. It's side lengths measure 3.5 cm, 4 cm and 3.5 cm.

4. A bird left its post and flew in a triangular path. It flew 21 yards south, 72 yards east and 75 yards diagonally to end back at the post.

STATION 5

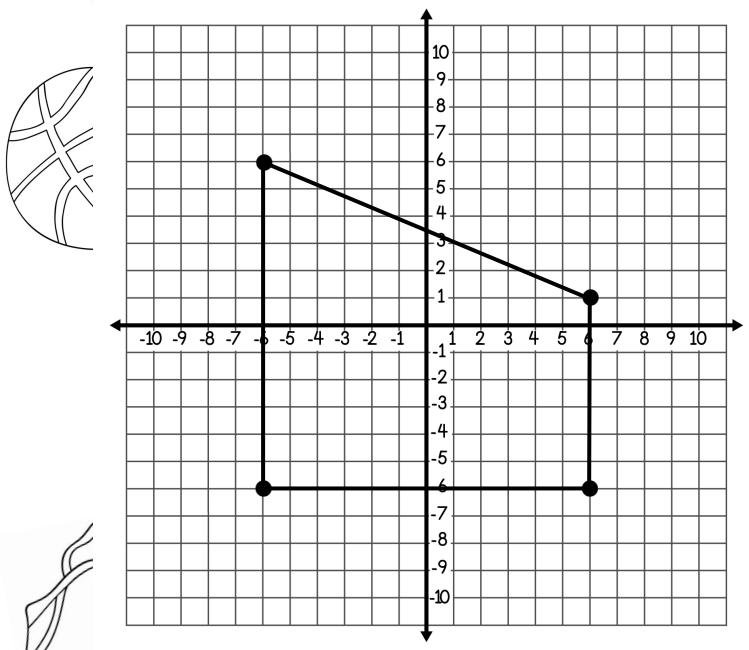
Using a pencil and a paper clip, spin both spinners. Plot the two points on the coordinate plane, and find the distance between the two points.





STATION 6

A city has plans to build a park that will be shaped like the trapezoid below. Each unit on the graph represents 100 feet. Use the graph to answer questions 1-3.



1. The city plans to build a fence around the park. How many total feet of fencing will they need?

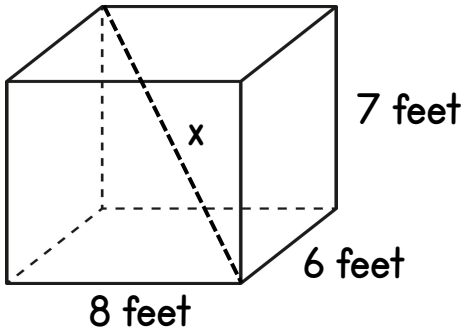
2. If fencing costs $7 per foot, what will the total cost of fencing be?

3. The city plans to plant a tree every 4 feet around the perimeter of the park. How many trees will they need to plant?

STATION 1

Find x, the diagonal distance inside each rectangular prism below. Round answers to the nearest tenth.

1



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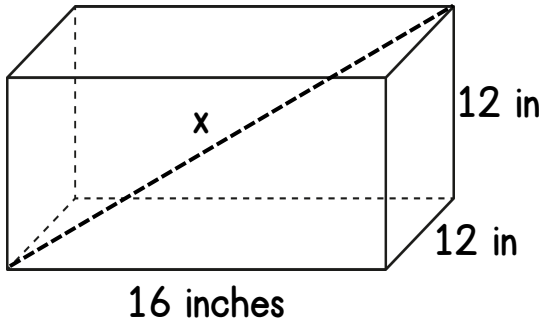

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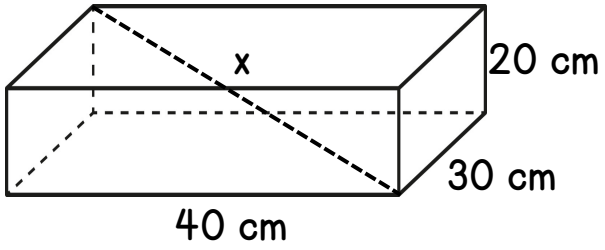

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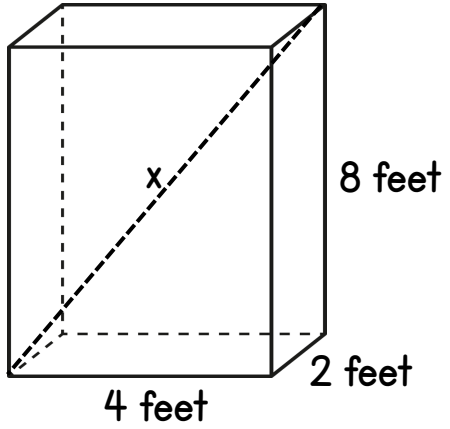
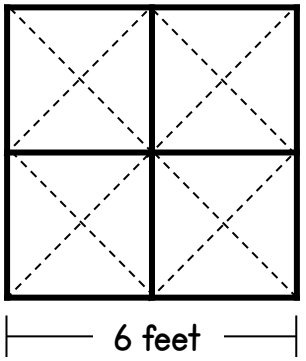


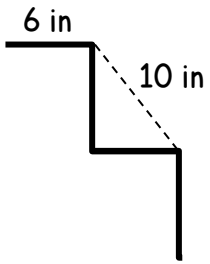
STATION 8

Use the Pythagorean theorem to help you solve each of the following problems.

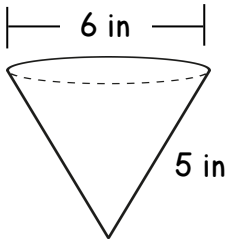
1 Mrs. Greever has four square desks pushed together as shown. She wants to tape a diagonal "x" on the top of each desk because the desks are broken. How many total feet of tape will she need? Round to the nearest whole number.



2 Max's house has two steps on the front porch as shown. If each step is the same size, what is the total vertical distance covered by the two steps?



3 Georgia bought a snow cone shaped like the cone below. What is the height of the snow cone?



Unit: Pythagorean Theorem
Stations Review

Name_____
Date _____ Pd ____

PYTHAGOREAN THEOREM – RECORDING SHEET

STATION 1:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

STATION 2:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

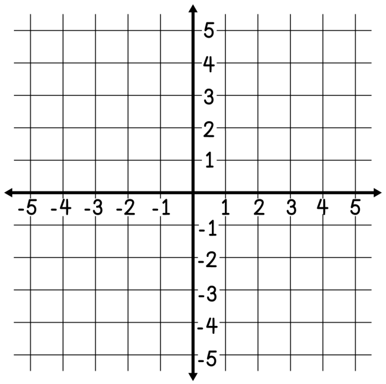
STATION 3:

1. Mistake: _____
   Correction: _____
2. Mistake: _____
   Correction:_____
3. Mistake: _____
   Correction:_____

STATION 4:

1. _____
   _____
2. _____
   _____
3. _____
   _____
4. _____
   _____

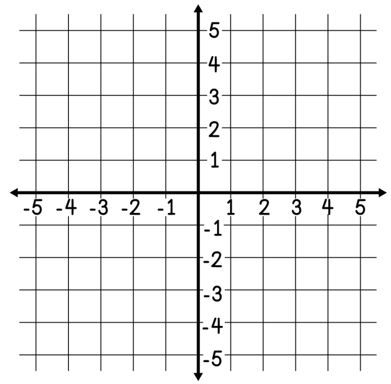
STATION 5:



Point 1: ________

Point 2: ________

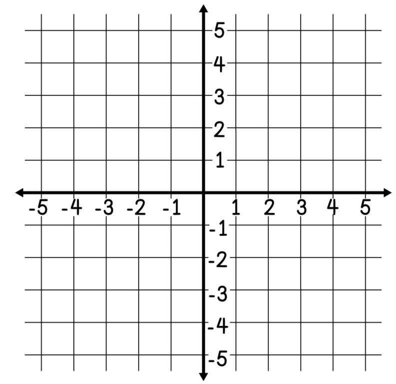
Distance: _______



Point 1: ________

Point 2: ________

Distance: _______



Point 1: ________

Point 2: ________

Distance: _______

STATION 6:

1. ______________________
2. ______________________
3. ______________________

STATION 7:

1. ______________________
2. ______________________
3. ______________________
4. ______________________

STATION 8:

1. ______________________
2. ______________________
3. ______________________

Unit: Pythagorean Theorem
Stations Review

Name Answer Key
Date _____ Pd ____

PYTHAGOREAN THEOREM – RECORDING SHEET

STATION 1:

1. Theorem
2. right
3. sum
4. legs
5. square
6. a
7. b
8. c
9. hypotenuse
10. 90°

STATION 2:

1. 51
2. 77
3. 16.3
4. 15.2
5. 34
6. 26.5

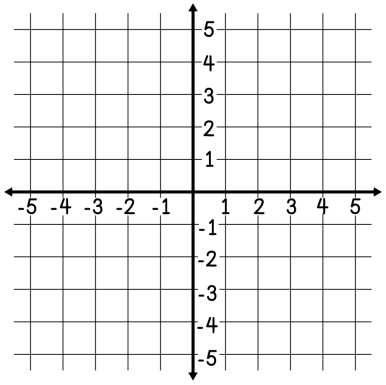
STATION 3:

1. **Mistake:** The square root was not taken at the last step.
   Correction: The missing side length is 25 units.
2. **Mistake:** The formula was set up to solve for c, but a leg is missing.
   Correction: The missing side length is 5 units.
3. **Mistake:** The legs were multiplied by two instead of squared.
   Correction: The missing side length is 39 units.

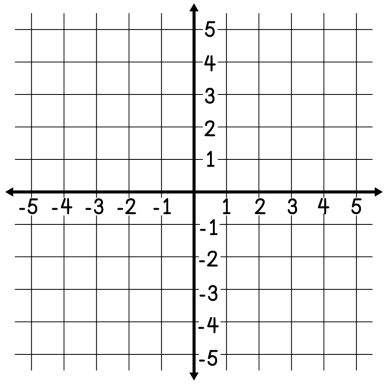
STATION 4:

1. Yes; $3.6^2 + 4.8^2 = 6^2$
2. Yes; $12^2 + 22.5^2 = 25.5^2$
3. No; $3.5^2 + 3.5^2 \neq 4^2$
4. Yes; $21^2 + 72^2 = 75^2$

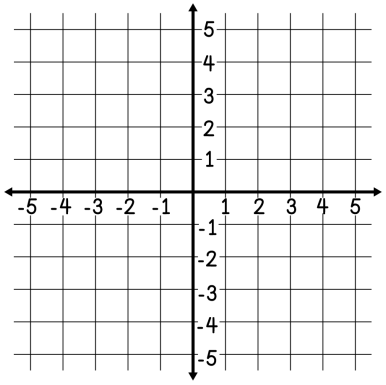
STATION 5: *Student answers will vary based on each spin.



Point 1: _____
Point 2: _____
Distance: _____



Point 1: _____
Point 2: _____
Distance: _____



Point 1: _____
Point 2: _____
Distance: _____

STATION 6:

1. 4,400 feet
2. $30,800
3. 1,100 trees

STATION 7:

1. 12.2 feet
2. 23.3 inches
3. 53.9 centimeters
4. 9.2 feet

STATION 8:

1. 34 feet
2. 16 inches
3. 4 inches