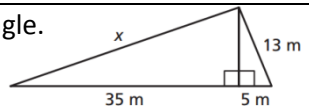
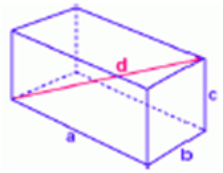
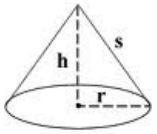
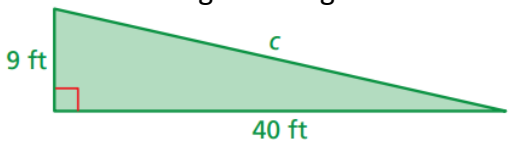
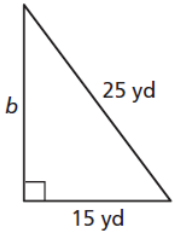
Content: Math	**Grade Level: 8th**

Standard: 8.G.7

Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

I can:

- apply the Pythagorean Theorem to determine unknown side lengths in right triangles in mathematical problems in two and three dimensions.
- apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world problems in two and three dimensions.

Score 4.0	**In addition to achieving level 3.0 content, the student makes in-depth inferences and applications that go beyond what was taught.**		**Sample Activities** • Find the area of the large scalene triangle.  • Find the length of d in the figure to the right if a = 8in., b = 3in. and c = 4 in. 
	3.5	In addition to achieving level 3.0 content, the student has partial success with level 4.0 content.	
Score 3.0	**The student:** • uses the Pythagorean Theorem to solve problems including: ○ solutions that are not integers. ○ mathematical problems. ○ Real-world problems. ○ 2-dimensional figures. ○ 3-dimensional figures. *NOTE: Students will be allowed to use calculators. **The student exhibits no major errors or omissions.**		• A food company is designing ice cream cones. They want the height of the cone to be 4 inches and the radius to be 2.5 inches. Find the length of the sloping side of the cone.  • The Irrational Club wants to build a tree house. They have a 9-foot ladder that must be propped diagonally against the tree. If the base of the ladder is 5 feet from the bottom of the tree, how high will the tree house be off the ground?
	2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	**There are no major errors or omissions regarding the simpler details and processes as the student:** • uses the Pythagorean Theorem to find the hypotenuse when the solution is an integer. • finds ANY missing length of a right triangle. **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.**		• Find the missing side length.  
	1.5	Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	**With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.**		
	0.5	With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	**Even with help, no understanding or skill demonstrated.**		