Activity 5 Assessment
Solving Right-Triangle Problems

Content: Applying the Pythagorean Theorem to Solve Problems

Substitutes given side lengths of a triangle into the equation for the Pythagorean relationship to determine whether a triangle is a right triangle	Substitutes given side lengths of a right triangle into the equation for the Pythagorean relationship to solve for an unknown side length	Applies the Pythagorean Theorem to real-world problems involving right triangles	Applies the Pythagorean Theorem and other properties of triangles to solve problems
"If the sides have lengths of 3 cm, 4 cm, and 5 cm, I can substitute them into the equation $a^2 + b^2 = c^2$ to check: $3^2 + 4^2 = 25$ and $5^2 = 25$. Since both sides equal 25, the triangle is a right triangle."	"I know the lengths of the legs of the triangle, so the unknown value is c, the hypotenuse. $c^2 = 3^2 + 4^2$, $c = 5$. So, the hypotenuse has length 5 cm."	"I can draw a right triangle to represent the distance between two locations. I can use the Pythagorean theorem to determine the length of the hypotenuse which represents the distance."	"The two triangles are similar, so if I determine the length of the hypotenuse of one triangle, I can multiply by the scale factor to determine the length of the hypotenuse of the other triangle."

Observations/Documentation

Mathology 9 PEI
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Competency: Representing Situations Using Right Triangles to Solve Problems			
Draws and labels a right triangle in non-contextual situations	Represents simple real-world situations using right triangles	Identifies and represents situations that involve right triangles within composite shapes	Identifies and represents situations that involve right triangles within 3-D objects
"I know that the sides have lengths 3 cm, 4 cm, and 5 cm, so 3 cm and 4 cm are the lengths of the legs and 5 cm is the length of the hypotenuse. I put a right-angle symbol where the two legs meet."	"I can use a right triangle to compare the distance diagonally across a field to the distance around the outside of the field. The legs represent walking around the outside and the hypotenuse represents going diagonally across."	"I could represent the side of the ramp with a composite shape that consists of a rectangle and a right triangle."	"I can make a right triangle whose hypotenuse lies along the diagonal of the box. I know the height of the triangle, but not the length of the other leg. I can determine that length by making another right triangle on the bottom of the box."
Observations/Documentation			