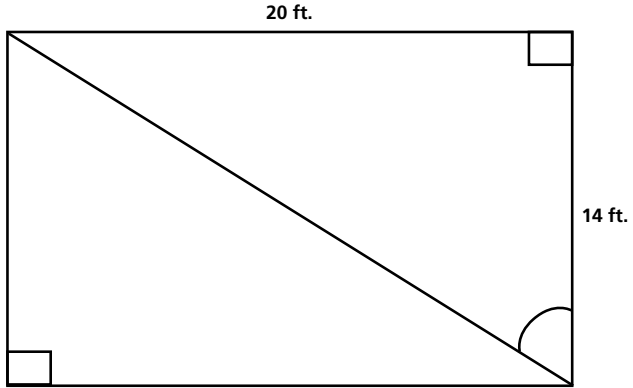
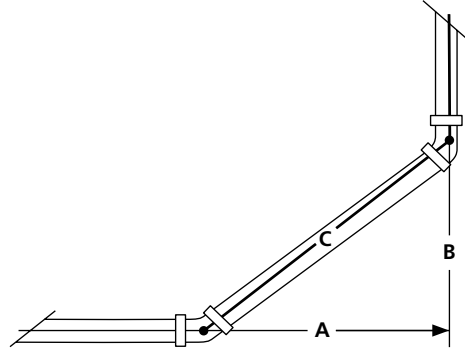
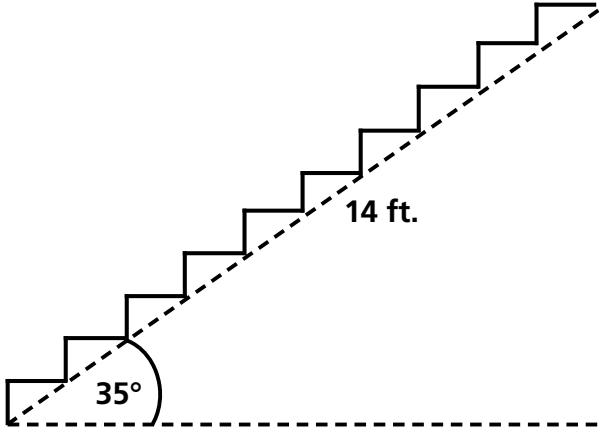
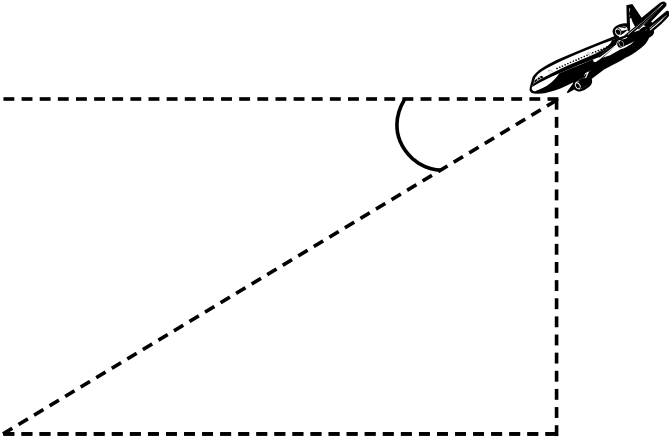


TRIGONOMETRY RAFT: CHOOSE YOUR OWN ADVENTURE! (page 1 of 3)

Role	Audience	Format	Topic
1. Metal Fabricator	Shop Supervisor	Physical model	<p>This drawing shows the way that metal supports will have to be constructed to frame the outside wall in a new building.</p> <p>Calculate the length of the diagonal piece of metal and all of the unknown angles. Create a scale model of the wall and support beams, showing all dimensions and angles.</p> 
2. BMX Rider	Builder	Drawing with measurements	<p>A new motocross course is being built and the starting ramp is being designed. A higher and longer ramp gives riders more speed to start the race.</p> <p>Draw a ramp that would have a length of at least 15 metres with an angle of elevation between 30° and 65°. Include all measurements on your drawing.</p>
3. Pipe Fitter	Co-Worker	Oral description of solution with drawing and calculations	<p>A pipe offset is pictured to the right:</p> <p>The length of pipe C is 24" and the length of measurement A is 13.75".</p> <p>How can you find the angle of the joints at the ends of pipe C?</p> 

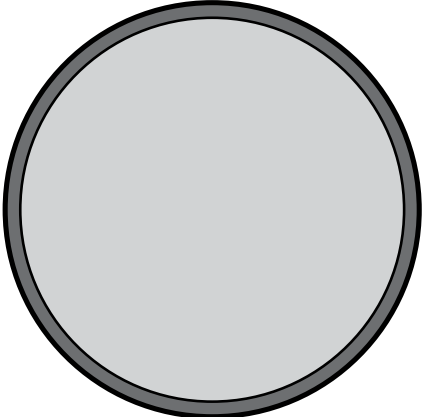
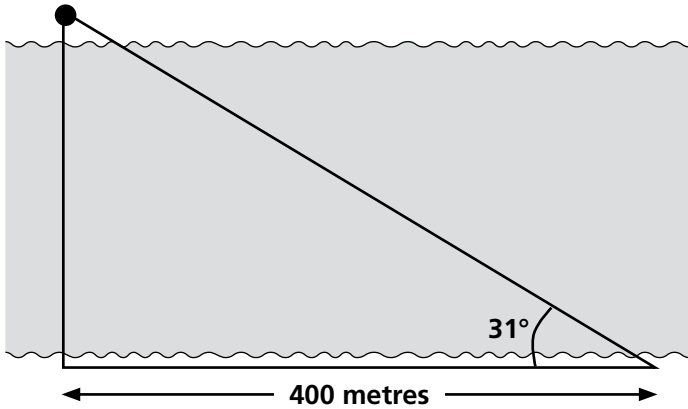


TRIGONOMETRY RAFT: CHOOSE YOUR OWN ADVENTURE! (page 2 of 3)

	<u>Role</u>	<u>Audience</u>	<u>Format</u>	<u>Topic</u>
4.	Salesperson	Customer	Oral explanation with drawing and calculations	<p>A customer comes into a flooring store looking for enough carpet to cover his basement stairs. He knows that the stairs rise at a 35° angle and that the staircase is 14 feet long. The stairs are 3 feet wide.</p> <p>Here is the drawing that he brought into the store to show the salesman:</p> <p>What is the total amount of carpeting required to cover the stairs? What assumption must you make in order to determine the amount of carpeting?</p> 
5.	Airplane Navigator	Pilot	Technical description	<p>An airplane is 1,500 m in the air.</p> <p>The Navigator sees that the airport is at a 20° angle of depression.</p> <p>How far away from the airport is the airplane?</p> 

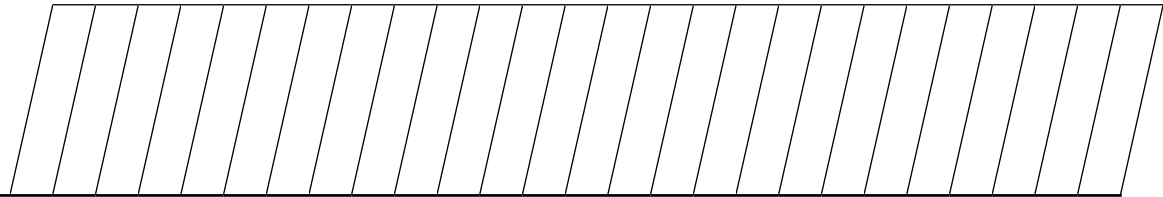


TRIGONOMETRY RAFT: CHOOSE YOUR OWN ADVENTURE! (page 3 of 3)

	<u>R</u> ole	<u>A</u> udience	<u>F</u> ormat	<u>T</u> opic
6.	Car Customizer	Machinist	Drawing	<p>Create a drawing of a design for a new tire rim that uses right triangles as a central theme. The drawing must include the side lengths and angles of at least one triangle. The most common tire rim diameter is 15 inches.</p> 
7.	Surveyor	Camp Director	Written letter	<p>Camp Mathisfun wants to build a footbridge across a river.</p> <p>The surveyor has created this drawing based on her measurements.</p> <p>Complete a letter to the camp director indicating the length of the footbridge and how it was determined.</p> 



CLASS ASSESSMENT CHECKLIST



Categories/Mathematical Processes/Criteria

Thinking																			
Reflecting	The student:																		
	Effectively judges the reasonableness of results																		
Communication																			
Communicating	The student:																		
	Clearly explains and logically justifies solutions orally, visually and/or in writing																		
Application																			
Selecting Computational Strategies	The student:																		
	Selects appropriate computational strategies to solve for unknown sides in right triangles																		
Connecting	The student:																		
	Describes relevant examples of problem solving using trigonometry in an occupation																		



REFLECTION EXIT CARD

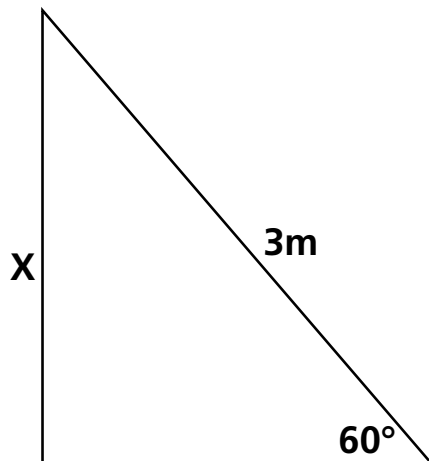
Reflection

Name: _____

What occupation were you focusing on in today's activity?

What does trigonometry have to do with the occupation that you looked at?

Solve for side X on the following triangle. Show your work.



Solve for angle A on the following triangle. Show your work.

