TRIGONOMETRY – 1. Sine & Cosine Law

Name:

Date:

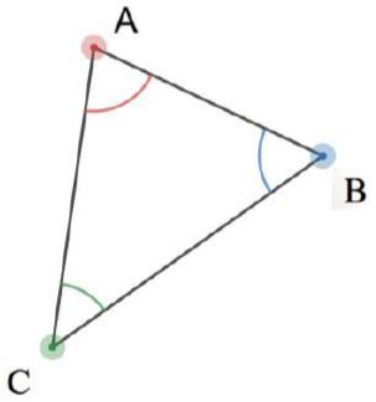
Please remember to show/communicate all your work. You DO NOT need to answer every question, two correct answers at any level will demonstrate a student's level of attainment.

LEGEND						
✓	M	✘	S	N	G	H
correct	mostly correct	incorrect	silly mistake	did not know how to start or skipped	with group	got help

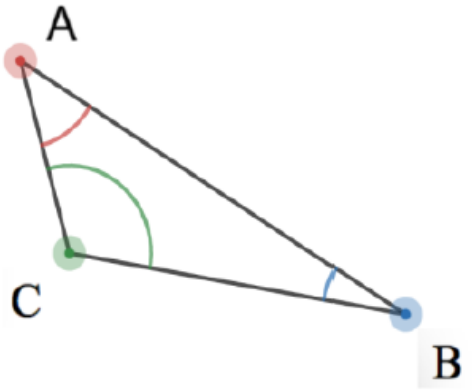
	Mild (🌶🌶)	Medium (🌶🌶🌶)	Spicey (🌶🌶🌶🌶)		
Questions	#1	#2	#3	#4	#5
Results					

---

1. Solve the following triangles (find all side lengths & angles).
   a) $\angle B = 60^0,\ \overline{AC} = 30, \overline{AB} = 25.2$

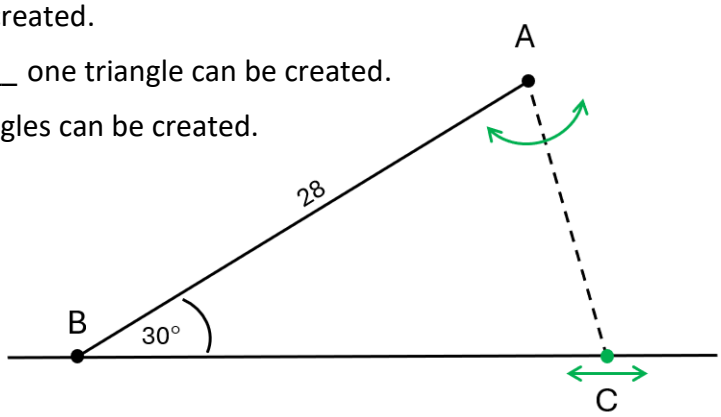


   b) $\overline{AC} = 11.6,\ \overline{AB} = 28.1, \overline{BC} = 21.2$

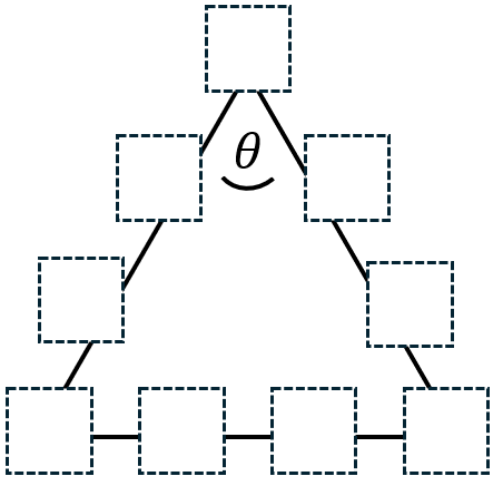


TRIGONOMETRY – 1. Sine & Cosine Law

2. Complete the following statements with calculated values (provide calculations). Point C can be placed anywhere along the base.
   - If $\overline{AC} <$ _____ no triangle can be created.
   - If $\overline{AC} \geq$ _____ , or if $\overline{AC} =$ _____ one triangle can be created.
   - If _____ $> \overline{AC} >$ _____ two triangles can be created.

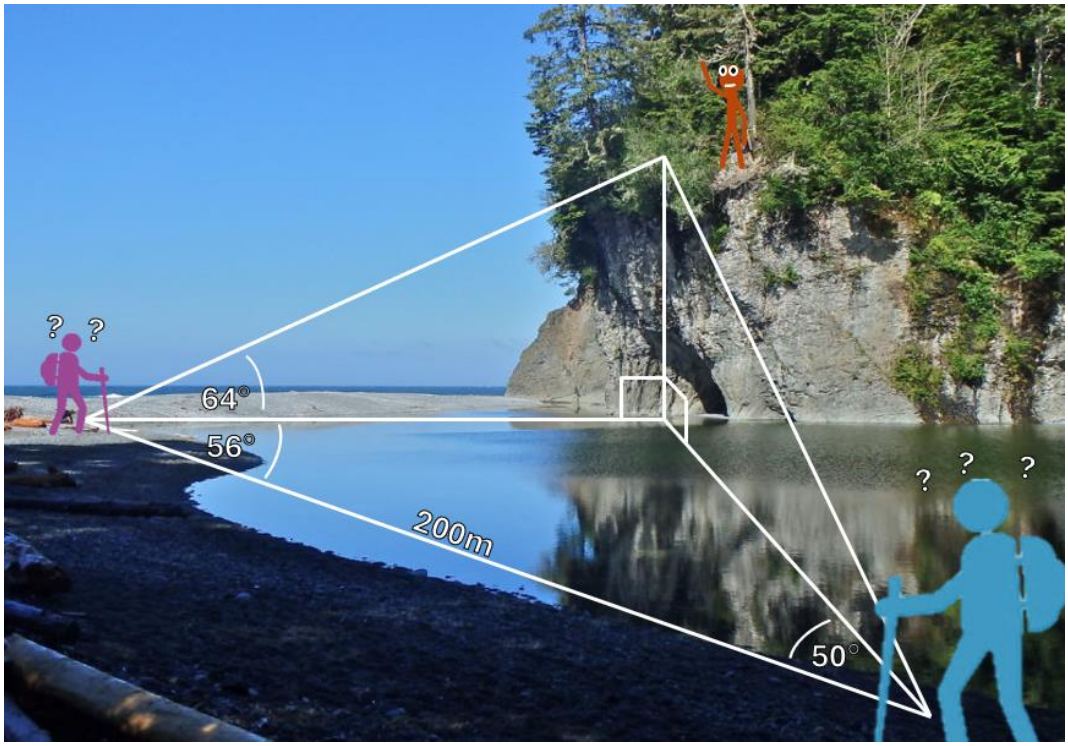


3. The sum of 4 numbers is equal to the length of the side. Without duplicating values, fill in the boxes using the digits 1 to 9 to create the **smallest, or largest, possible value for θ**. Explain some of the steps you took to solving, your initial thoughts/attempts, and include any rough work to help show your thinking (be careful not to make an impossible triangle).



TRIGONOMETRY – 1. Sine & Cosine Law

4. Three friends got separated on a hike. Two of them managed to stay on the ground but the third somehow ended up at the top of a cliff. How high up did the person climb before noticing that they had gone the wrong way.



TRIGONOMETRY – 1. Sine & Cosine Law

5. Who gets the ice-cream? (note: $speed = distance/time$)