

Name: _____

MAP4C1

Date: _____

Trigonometry Review

Communication in all questions must include:

- Enough steps shown to clearly demonstrate thinking
- Solutions that are neat and easy to follow
- Proper use of mathematical symbols
- Equal signs aligned
- Units used as required
- Concluding statements for all word problems
- Fractions reduced to lowest terms
- Correct rounding.

You will be given the following information:

$$a^2 + b^2 = c^2$$

SOH CAH TOA

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

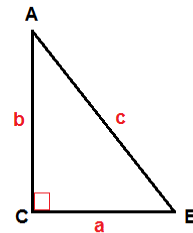
$$a^2 = b^2 + c^2 - 2bc \cos A \quad \cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

1. Write the three trigonometric ratios for A in the following triangle:

Sin A =

Cos A =

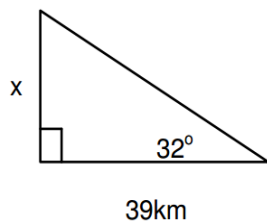
Tan A =



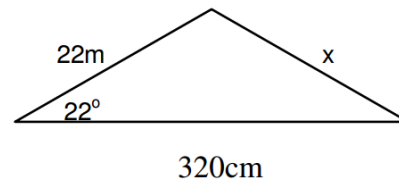
2. For each triangle below:

- Explain which strategy/equation you would use to find the missing side (x).
- Find the missing side (x) in each diagram. (Include units and round to 1dp)

a)



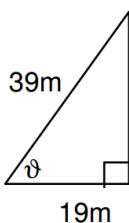
b)



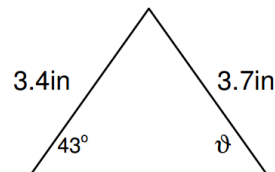
3. For each triangle below:

- Explain which strategy/equation you would use to find the missing angle (θ).
- Find the missing angle (θ) in the diagram below. (Include units and round to 1dp)

a)

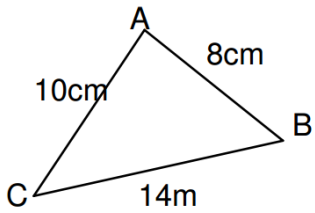


b)



4. a) What does it mean to “solve a triangle”?

b) Solve the triangle. Summarize your answers in the chart. (Round to 1 dp)



$\angle A =$	$a =$
$\angle B =$	$b =$
$\angle C =$	$c =$

5. Angle A is between 0° and 180° . Determine all measures of angle A in each of the following cases:

a) $\sin A = 0.2079$

b) $\cos A = -0.8191$

c) $\tan A = 1.428$

c) $\tan A = -2.145$

Communication:

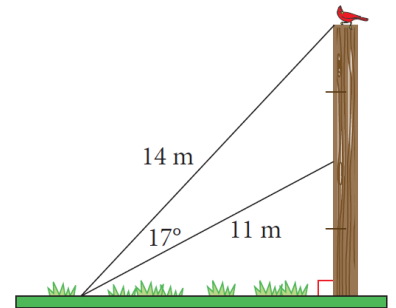
6. How do you know when to use SOH CAH TOA? How do you know when to use the Sine Law? How do you know when to use the Cosine Law? Describe in words and given an example.

Word Problems (answer on a separate piece of paper):

Draw and label a diagram for each. Round to 1 dp. Remember to write a “therefore” statement at the end.

7. A ladder 10 feet long is leaning against a wall at a 71° angle. How far from the wall is the foot of the ladder? How high up the wall does the ladder reach?
8. Billy was making a blueprint of his home, which is triangular in shape. One side of the triangular blueprint is 1.3 meters long. The angles in the triangle at each end of the 1.3m side are 44° and 101° . Determine the lengths of the other two sides of the blueprint.
9. A machinist is cutting out a large triangular piece of metal to make a part for a crane. The sides of the piece measure 58 inches, 46 inches, and 62 inches. What are the angles between the sides?
10. A pole is supported by two guy wires, as shown. One wire is attached to the top of the pole and the other is attached at the midpoint.
 - a) Determine the height of the pole.
 - b) How far from the base of the pole are the wires anchored?

More practice: Complete Obtuse Angle Worksheet and Textbook questions:
p. 54 # 1, 2, 4, 6-27



Trigonometry Flow Chart:

