Math 10-C Trigonometry Assignment List **Name:** _____

C1: The Basics

- Trigonometry Review – The Basics (Handout)

C2: Trig Ratios

- Trigonometry Ratios Investigation
- Similar Triangles Practice
- Text pg. 41: 7,8,10,14
- Text pg. 41: 4,5,8b
- Text pg. 44: 1,3,7,8,9
- Trigonometry Quick Check C1-C2

C3: Solving Triangles

- Text pg. 48: 1bc
- Text pg. 49: 4,7, 11abc

C4: Solving Problems

- Text pg. 49: 6,8,9,12

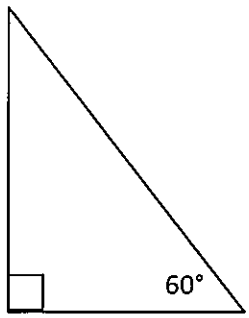
Review

- Trigonometry Assignment
- Trigonometry Quiz C1-C4
- Text pg. 51: 5,7,9,10,12bc,13-16

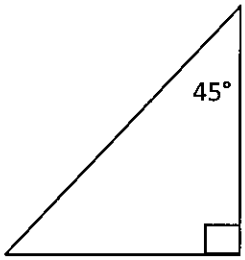
M10C Trigonometry Review – The Basics Name: _____

1. Determine the missing angle in each triangle.

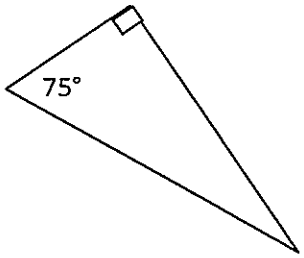
a)



b)

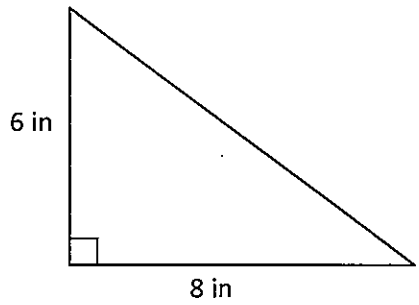


c)

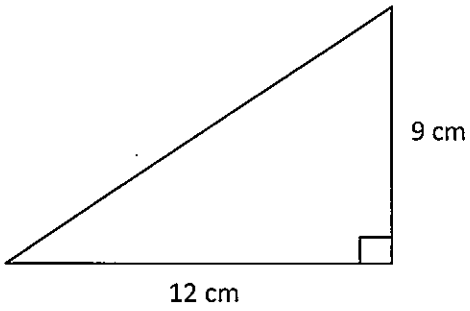


2. Determine the missing side in each triangle.

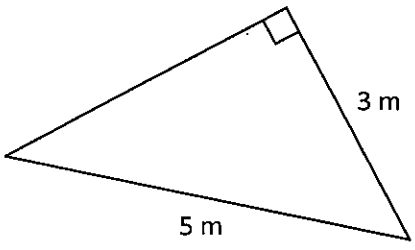
a)



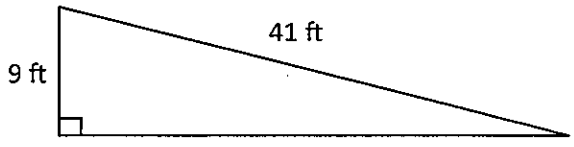
b)



c)

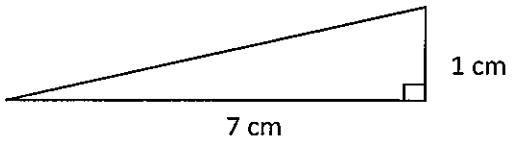


d)

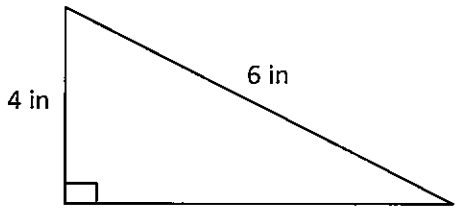


3. Determine the missing side in each triangle. State your answer as a radical in simplest form and as a decimal rounded to the nearest tenth.

a)

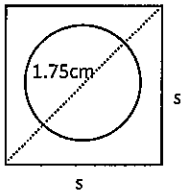


b)



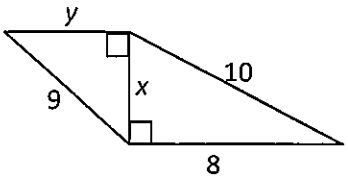
4. Paul rows across a river that is 84m wide. If he traveled a total of 89m, how far down stream did the current carry him? (Rounded to the nearest tenth)

5. A square nut measures 1.75 cm from corner to corner. Determine the length of each side, rounded to the nearest tenth.

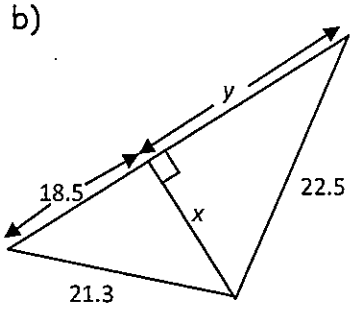


6. Calculate the lengths of x and y in the diagrams below. Give your answers correct to 1 decimal place where appropriate. All dimensions are given in cm.

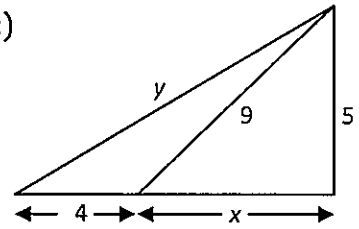
a)



b)



c)

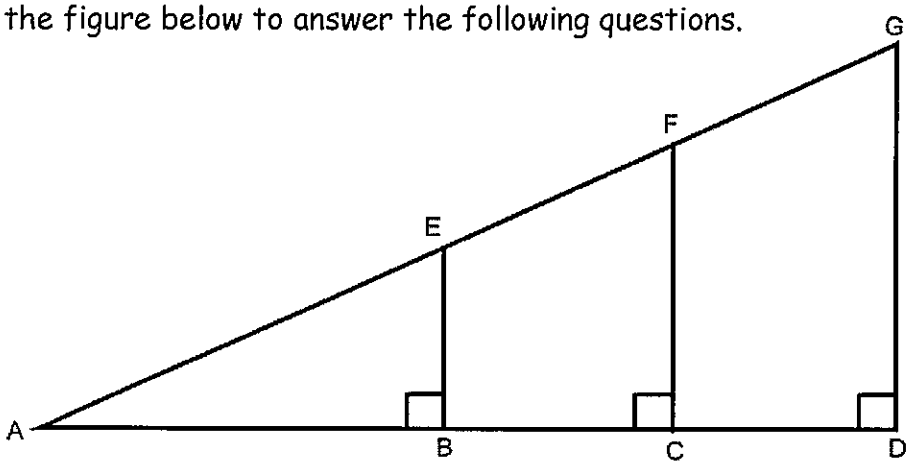


Answers

1. a) 30° b) 45° c) 15° 2. a) 10in b) 15cm c) 4m d) 40ft
3. a) $5\sqrt{2}$ b) $2\sqrt{5}$ 4. x = 29.4m 5. s = 1.2cm
6. a) x = 6, y = 6.7 b) x = 10.6, y = 19.9 c) x = 7.5, y = 12.5

Trigonometry Ratios Investigation

Use the figure below to answer the following questions.



ΔABE *and* ΔACF *and* ΔADG are similar triangles. What are similar triangles?

Measure the following sides and then calculate the last column. Express each measurement to the nearest millimeter (tenth of a centimeter).

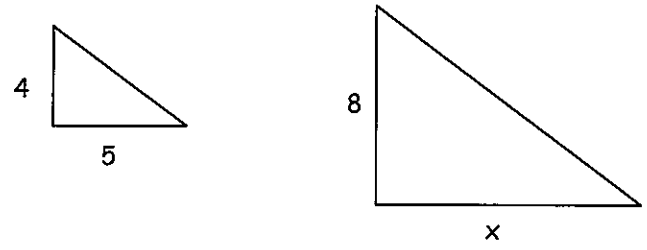
EB =	AB =	$\frac{EB}{AB} =$
FC =	AC =	$\frac{FC}{AC} =$
GD =	AD =	$\frac{GD}{AD} =$

What do you notice about the ratios in the last column?

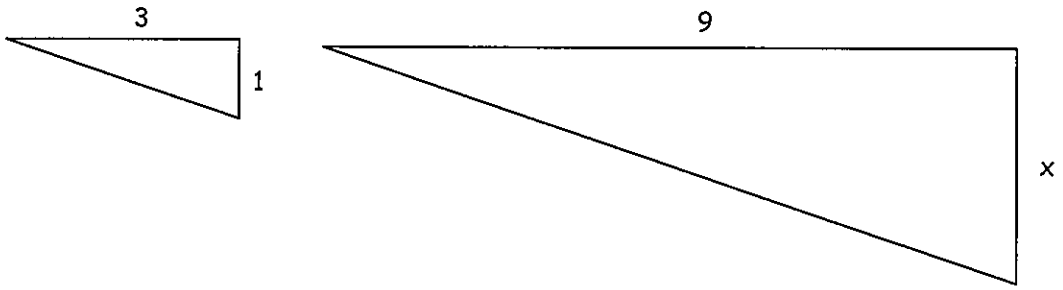
Similar Triangles Practice Name: _____

For each pair of similar triangles, determine the length of the indicated side.

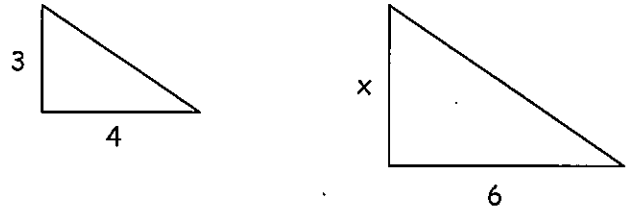
1.



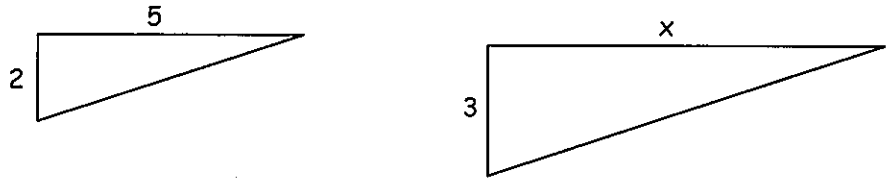
2.



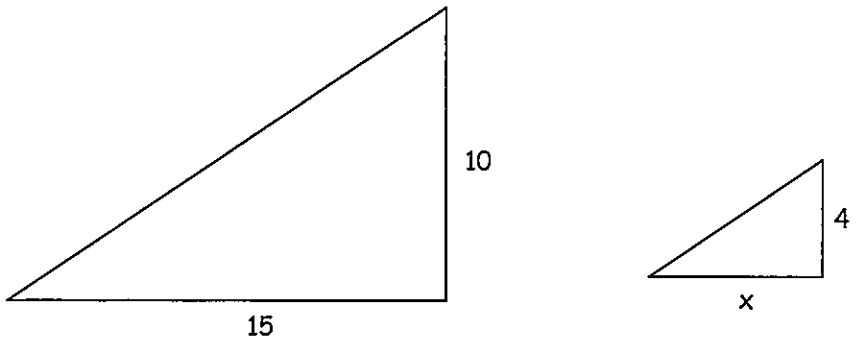
3.



4.



5.

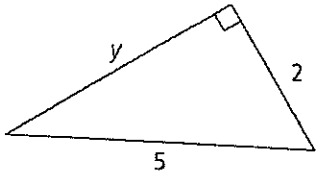


4

/ 5

Math 10-C Trigonometry Quick Check C1-C2 Name: _____

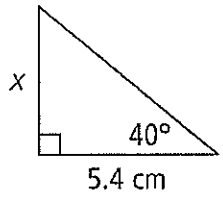
1. Determine the value of y rounded to the nearest tenth.



y = _____

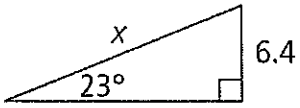
2. Determine the value of x rounded to the nearest tenth.

a)



x = _____

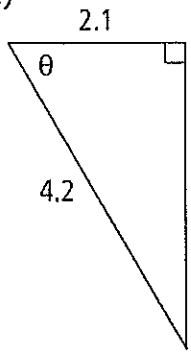
b)



x = _____

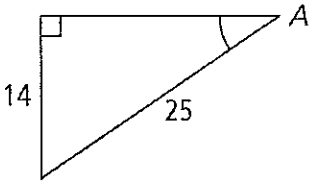
3. Determine the value of the indicated angle rounded to the nearest degree.

a)



θ = _____

b)



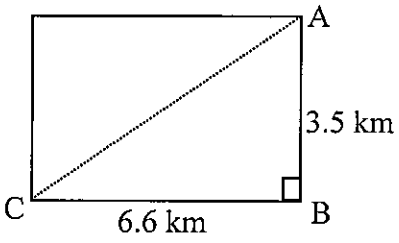
∠A = _____

Name: _____

Math 10 Common
Trigonometry Assignment

For the following questions, show ALL work, then write your answer in the box provided, including the correct units.

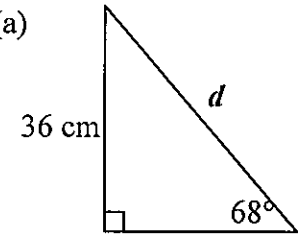
1. Calculate how much shorter path AC is than walking along path AB and then along path BC. Round your answer to the nearest tenth.



ANSWER: _____

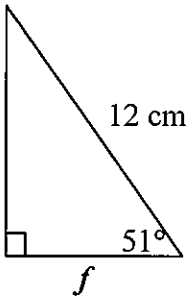
2. Calculate the missing side for each of the following triangles. Round your answers to the nearest tenth.

(a)



d: _____

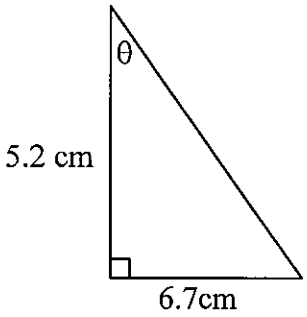
(b)



f: _____

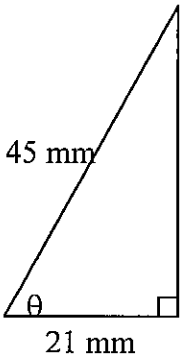
3. Solve for the missing angle in each of the following triangles. Round your answers to the nearest degree.

(a)



θ: _____

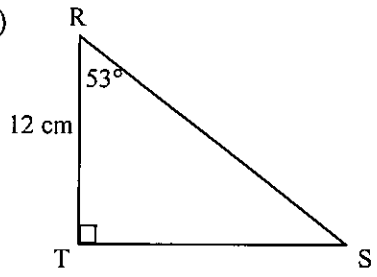
(b)



θ: _____

4. Given the following triangles, solve for all missing sides and/or angles. Round all lengths to the nearest tenth and all angles to the nearest degree.

(a)

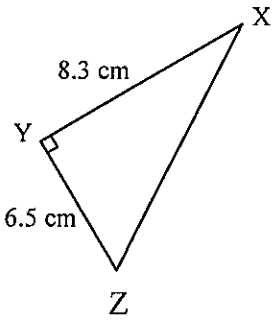


$r =$ _____

$t =$ _____

$\angle S =$ _____

(b)

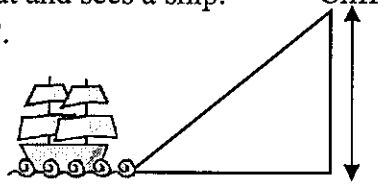


$y =$ _____

$\angle X =$ _____

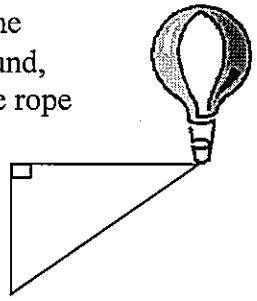
$\angle Z =$ _____

5. A person standing on top of a cliff 250 m above the sea looks out and sees a ship. The angle of elevation to the top of the cliff from the ship is 36°. **Complete the diagram below** and use it to find how far it is from the ship to the bottom of the cliff. Express you answer to the nearest metre.



ANSWER: _____

6. From the basket of a hot air balloon, the angle of depression to where the balloon is anchored is 68°. If the hot air balloon is 54 m above the ground, how long is the rope connecting it to the anchor point? Assume that the rope line is straight and express your answer to the nearest tenth of a metre.



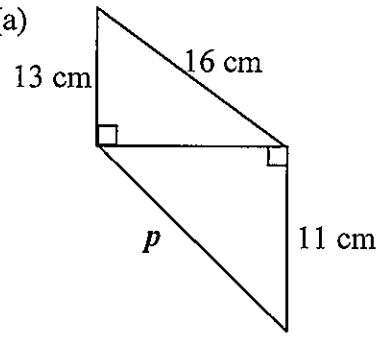
ANSWER: _____

7. A fishing captain detects a school of fish at a depth of 50m. If the angle of depression from the captain to the fish is 23°, what horizontal distance, to the nearest tenth of a metre, is the ship from the school of fish? (Draw and label a diagram)

ANSWER: _____

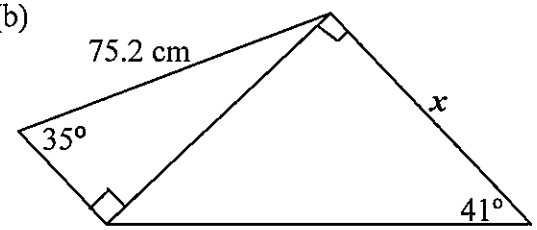
8. Solve for the missing variable, rounding all answers to the nearest tenth.

(a)



p: _____

(b)



x: _____

9. Two trees are 100m apart. From a point halfway between the trees, the angle of elevation to the top of the shorter tree is 8° and the angle of elevation to the top of the taller tree is 13°. How much taller is the one tree than the other? Draw and label a diagram. Round your answer to the nearest tenth.

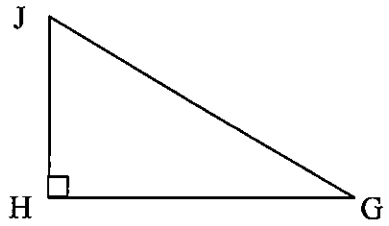
ANSWER: _____

M10C Trigonometry Quiz C1-C4 **/ 11** **Name:** _____

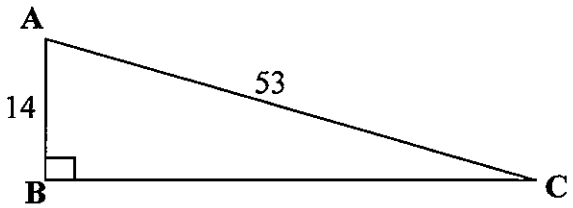
Date: _____

You must show ALL work to receive full marks.

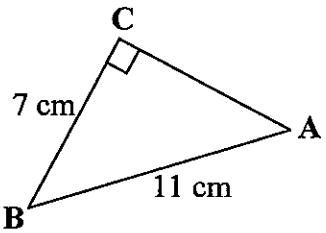
1. Label this triangle with ***hypotenuse***, ***adjacent***, and ***opposite***, with **respect to angle G.** **[1 mark]**



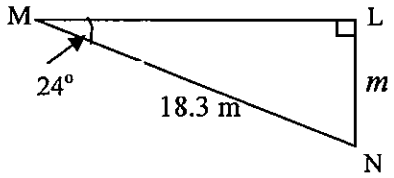
2. Given the diagram below, determine the length of side *a*, rounded to the nearest tenth. **[1 mark]**



3. In the triangle shown, determine ∠B to the nearest degree. **[1 mark]**



4. For the triangle LMN, calculate the measure of side *m*, rounded to the nearest tenth of a metre. **[1 mark]**

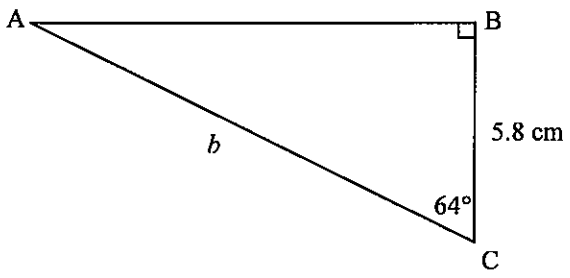


5. Solve triangle ABC. Find ∠**A** to the nearest degree and sides ***b*** and ***c*** to the nearest tenth of a centimetre. **[3 marks]**

∠A= $a = 5.8$cm

∠B= 90° $b =$

∠C= 64° $c =$



6. The angle of depression from a bird at the top of a tree, to a cat on the ground, is 57°. The height of the tree is 18.5 m. **Draw** a diagram to represent this problem, then **determine** the distance between the cat and the base of the tree, rounded to the nearest tenth. **[2 marks]**

7. The two triangles below are joined by a common side. **Determine** the value of x in the diagram above, rounded to the nearest tenth. **[2 marks]**