Workplace Mathematics 11

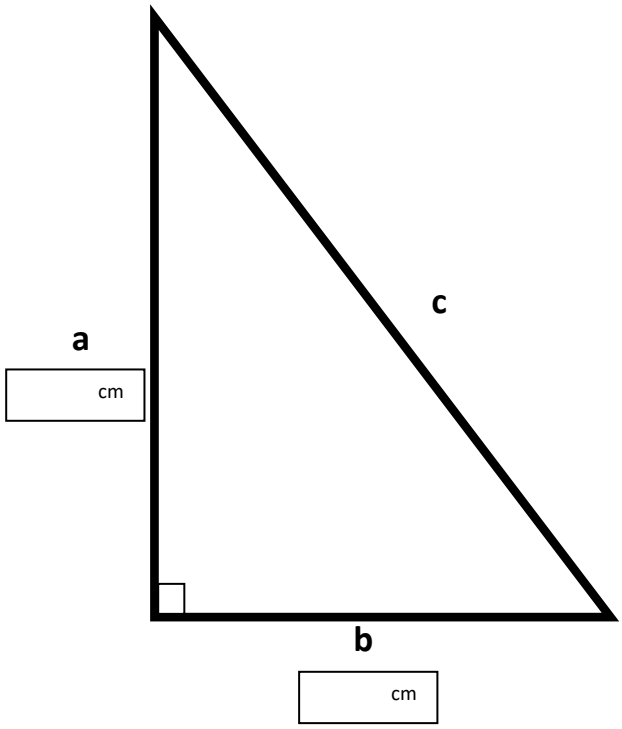
UNIT 4 Project: TRIGONOMETRY (LG's 10-11)

Read through the information below and use it to complete the sections which follow. Be sure to answer each question and show your work clearly to demonstrate how you got your answers.

PART A **/ 20 marks**

1 Measure the lengths of the sides of the triangle below labeled **a** and **b**. (2 marks)
(Answer in centimeters)

a = _____ cm **b** = _____ cm



WORK for #2:

2 Use the **Pythagorean Theorem** to calculate the length of the **hypotenuse**. (2 marks)
Show your work.

HINT: The "hypotenuse" is the longest side.
BIGGER HINT: It's "**c**".

3 Now measure the length of the **hypotenuse** and compare your two answers. (2 marks)

Pythagorean length of **C** (from #2): _____ cm

Measured length of **C**: _____ cm

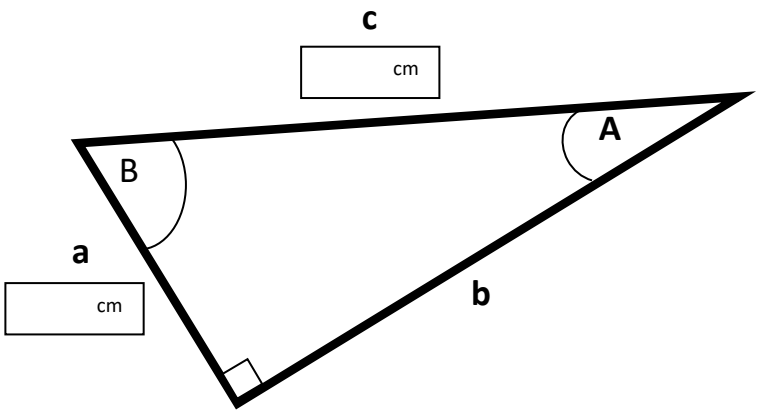
How close was your measurement of the hypotenuse to its calculated value?

_____

PART B

1 Measure the lengths of the sides of the triangle below labeled **a** and **c**. (2 marks)
(Answer in centimeters)

a = _____ cm **c** = _____ cm



2 Use a **TRIGONOMETRIC RATIO** to find the Measure of: (4 marks)
*Show each step in your work. Your method must show which trig ratio you are using.

Angle A: _____

Angle B: _____

3 Now add up the measures of the 3 angles. (HINT: The 3 angles in all triangles add up to 180°)

The 3 angles add up to **:** _____ (2 marks)

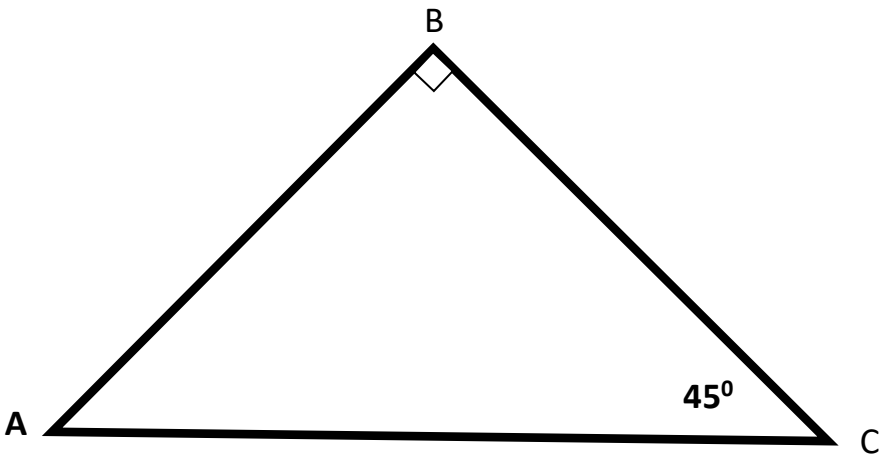
How close was your measurement of the three angles to 180°?

_____

PART C

1. Measure the length of the side $\overline{\mathbf{AB}}$. (Answer in centimeters) (1 mark)

$\overline{\mathbf{AB}}$ = _____ cm



2. Use a **TRIGONOMETRIC RATIO** to find the length of the side $\overline{\mathbf{BC}}$. (2 marks)
*Show your work!

$\overline{\mathbf{BC}}$ = _____ cm

3. Use another **TRIGONOMETRIC RATIO** to find the length of the side $\overline{\mathbf{AC}}$. (2 marks)
*Show your work!

$\overline{\mathbf{AC}}$ = _____ cm

4. What is the measure of angle A? _____ (1 mark)