

Name: \_\_\_\_\_

Date: \_\_\_\_\_

MFM 2P

**Formative Assessment: Primary Trigonometric Ratios**

**Remember: SOH – CAH - TOA**

**Expectations you're working on...**

- Students will solve problems involving right triangles using the primary trigonometric ratios and the Pythagorean Theorem

Still Learning...	Almost There...	Got It!

Part A-Knowledge & Understanding

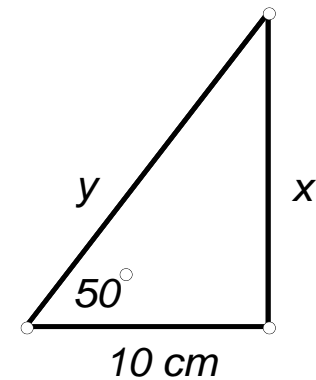
1. Find the measures of the indicated sides and angles. Round your **final** answers to the nearest degree or cm.

a)

i) For  $x$ : Using the  $50^\circ$  as your reference angle, what ratio would you choose? \_\_\_\_\_ (sin, cos, tan)

ii) Set up the proportion you're going to use to solve for  $x$ .

iii) Solve for  $x$ .

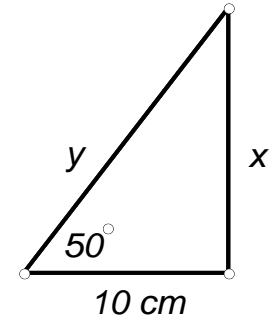


a)

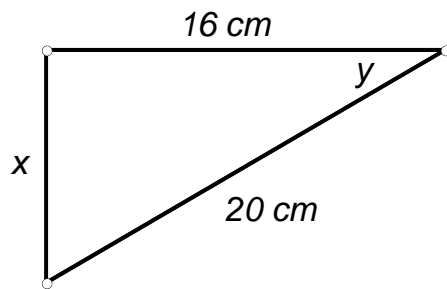
iv) For  $y$ : Using the  $50^\circ$  as your reference angle, what ratio will you use? \_\_\_\_\_ (sin, cos, tan)

v) Set up the proportion you're going to use to solve for  $y$ .

vi) Solve for  $y$ .



b) Solve for the missing angle  $y$ .

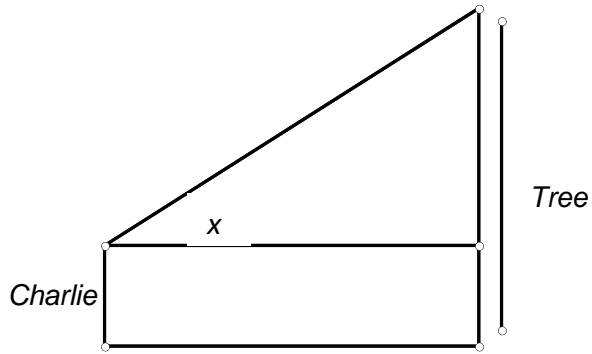


i) What inverse trig ratio will you use? \_\_\_\_\_ ( $\sin^{-1}$ ,  $\cos^{-1}$ ,  $\tan^{-1}$ )

ii) Solve for  $y$ .

Part B-Application

2. A tree is 5.0 m tall and Charlie, who is 1.0 m tall, stands 8.0 m from the tree. She looks up to the top of the tree and measures the *angle of elevation*,  $x$ , using a special device called a hypsometer.



a) Label the diagram with the information from the problem.

b) Calculate the angle of elevation,  $x$ , from Charlie's point of view. Express your answer to the nearest degree.

3. A hydro pole, 10 m tall, is to be supported by two wires—one on both sides of the pole. The guy wires make angles of  $60^\circ$  with the ground. The hydro pole forms a right angle with the ground.

a) Prepare a neatly-labelled sketch of the information presented in the problem.

b) How long is each of the wires? Round your answer to the nearest metre.

## Success Criteria: Forming Our Assessment for the Primary Trigonometric Ratios

### Knowledge & Understanding

- How can you tell if someone has a good understanding of the concept of the trigonometric ratios—sin, cos, and tan?
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### Communication

- Specific: What does good written, mathematical communication look like when solving problems involving the primary trig ratios—sin, cos, and tan?