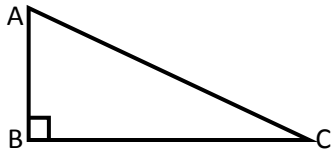
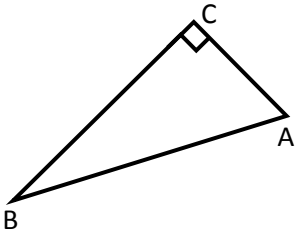
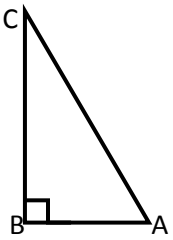
MPM 2D

THE PRIMARY TRIGONOMETRIC RATIOS

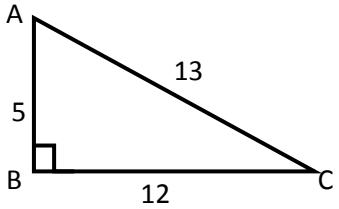
1. Label the sides of each right triangle relative to ∠A.

A) 

B) 

C) 

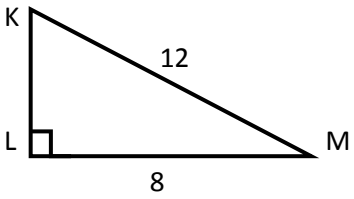
2. Using the triangle to the right, determine each ratio to 4 decimal places.

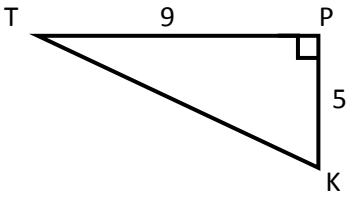


A) sin C B) cos C C) tan C

D) sin A E) cos A F) tan A

3. Which primary trigonometric ratio best relates the given side lengths to ∠K?

A) 

B) 

4. Determine the value of each ratio to 4 decimal places.

A) sin 48° B) tan 21° C) cos 73°

5. Determine the measure of θ to the nearest degree.

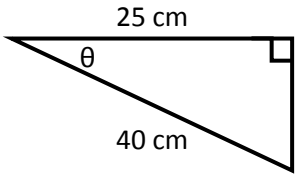
A) sin θ = 0.75 B) cos θ = 0.866 C) tan θ = 2.5

6. Solve each of the following for x.

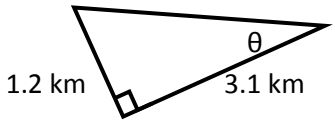
A) $\cos 50° = \frac{x}{8}$ B) $\tan 61° = \frac{12}{x}$ C) $\sin x = \frac{4}{5}$

7. Use the Pythagorean Theorem to solve for the third side of each triangle. Then state the primary trigonometric ratios for θ.

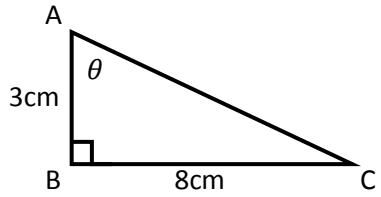
A)



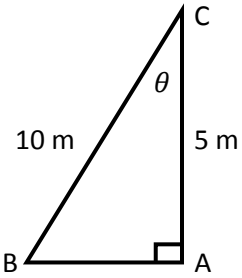
B)



C)



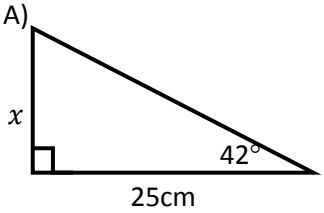
D)



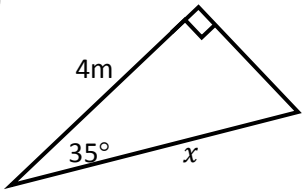
8. For each triangle,

- Label the sides relative to the given angle.
- Write the equation for the trigonometric ratio that best relates the ***relevant*** sides to the given angle.
- Use the trigonometric ratio to solve for x.

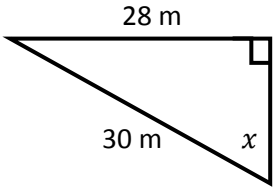
A)



B)



C)



9. Draw each triangle with the given information. Then solve for all missing angles and side lengths.

A) $\Delta ABC,\ B = 90°,\ A = 60°, a = 5$

B) $\Delta PQR,\ R = 90°,\ p = 15, q = 6$

C) $\Delta RST,\ T = 90°,\ s = 4,\ t = 8$