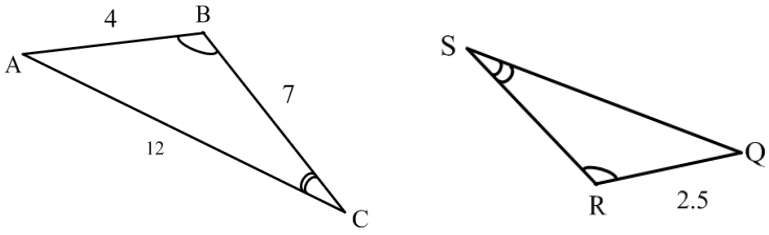
Name: _____

MPM 2DB – Unit 1 Practice Test - Trigonometry

Multiple Choice – Circle the best answer (K): (**4**)

1. ΔABC ~ ΔQRS.

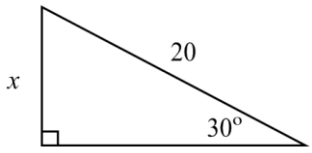


State the correct proportion that will help you find side ***q***:

a) $\frac{q}{7} = \frac{2.5}{4}$ b) $\frac{q}{7} = \frac{2.5}{12}$ c) $\frac{q}{2.5} = \frac{7}{4}$ d) $\frac{7}{q} = \frac{12}{2.5}$

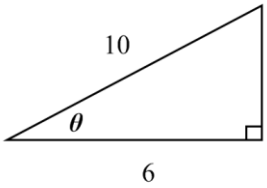
2. Which Trig Ratio would you use to solve for the following side (***x***)?

a) Sine b) Cosine c) Tangent



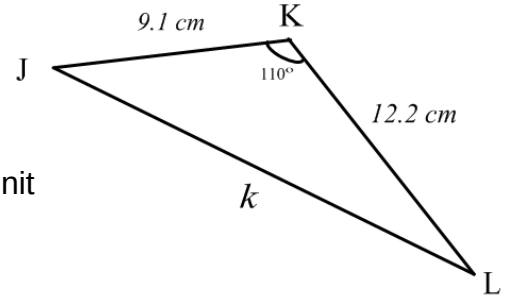
3. Which Trig Ratio would you use to solve for the following angle (***θ***)?

a) Sine b) Cosine c) Tangent



4. Which "*Law*" would I select to solve for side ***k*** in the following triangle?

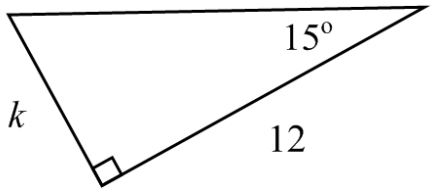
a) Sine Law
b) Cosine law
c) Tangent Law
d) Law & Order: Special Triangles Unit



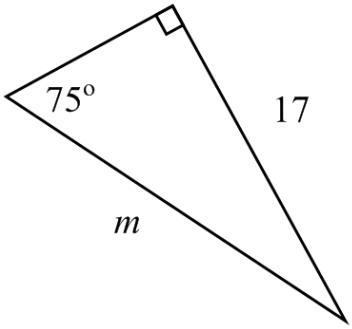
Short Answer (Show your work) (K)

5. Solve for the missing side (*round to the nearest tenth*) (**8**)

a)

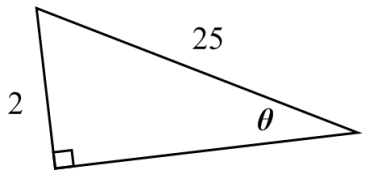


b)

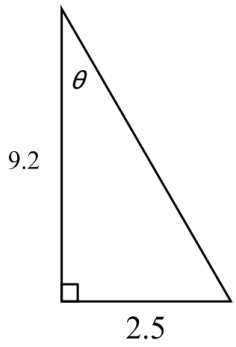


6. Solve for the missing ANGLE (**θ**) : (**8**)

a)

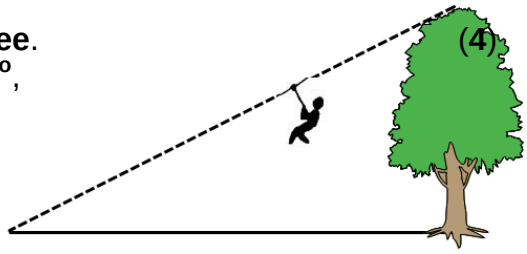


b)



<u>Application</u> (Be sure to **create a diagram if needed**, **label** your sides/angles, and **solve**!)

7. Mr. Gilbert wants to zip-line down form a **50 ft. tree**. If the angle the rope makes *with the ground* is **25^{o}**, **(4)**



How long is **the rope**?

8. **Create a sketch for** $\triangle$**PQR** where ***angle P = 70°*****, *angle Q = 33°*****, and *side r = 48*.**

Find side q (to the nearest degree). **(5)**

9. A speedboat took off from a dock at **an angle of 65° from the shore**, at a speed of *80 km/h*. At the same time, a jet ski took off at **an angle 107°**, travelling at *160 km/h*.

   After 30 minutes, how far apart are the two watercrafts from each other? **(10)**
   (1 decimal place)

10. **Find the length of q**, to the nearest metre. **(10)**

    (Hint: fill in **all possible angles** before '*splitting up*' the triangles)