

Part A: Similar Right Triangles [G-SRT.6]

1. For Triangle ABC, **determine** if each statement is true or false.

A) $\sin(C) = \frac{12}{13}$

True

False

B) $\sin(C) = \frac{5}{12}$

True

False

C) $\tan(A) = \frac{5}{12}$

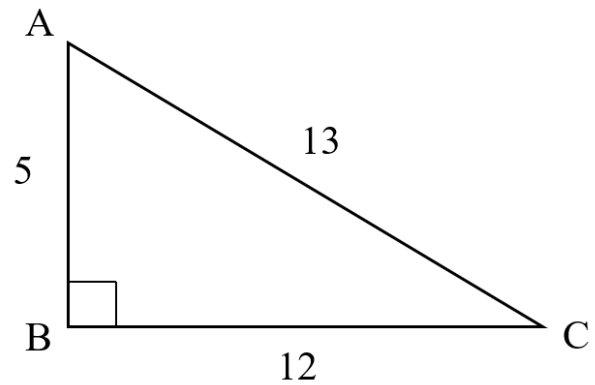
True

False

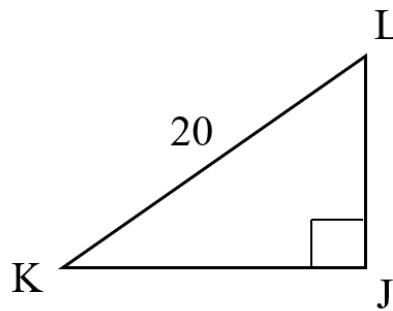
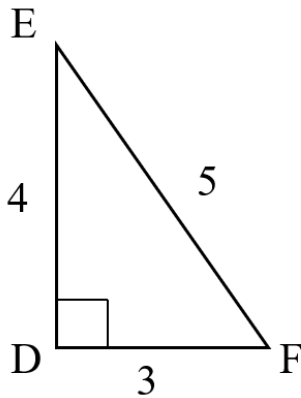
D) $\cos(A) = \frac{5}{13}$

True

False



2. Triangles DEF and JKL are similar.

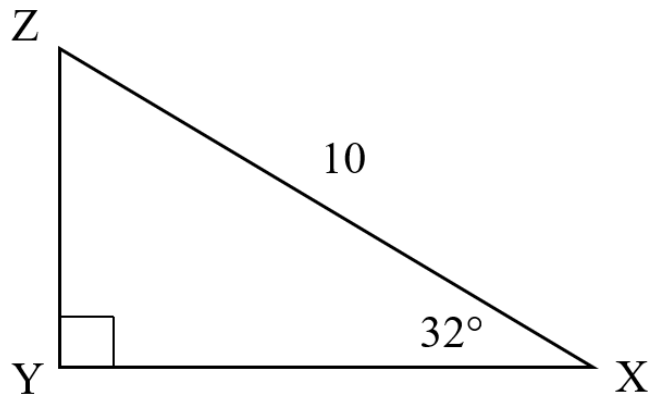


Determine which angles, if any, have a tangent of $\frac{4}{3}$. **Justify** your reasoning.

3. Given $\cos(30^\circ) = \frac{\sqrt{3}}{2}$, **determine** the angle measure θ such that $\sin \theta = \frac{\sqrt{3}}{2}$. **Justify** your reasoning.

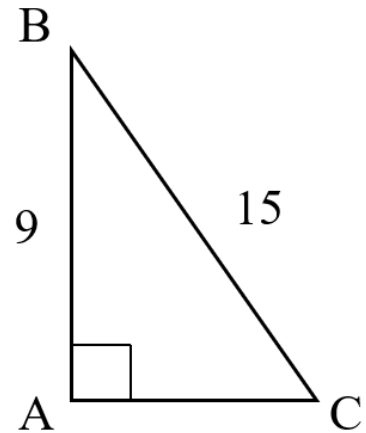
Part B: Solving Right Triangles [G-SRT.8]

4. For Triangle XYZ, **find** the length \overline{XY} to the nearest tenth. **Show** your work.



5. Gabby is attempting to find the length of side AC. For each expression below, **select** Yes if the expression will give Gabby the length of side AC or No if it will not.

- | | | |
|-----------------|-----|----|
| A) $9 \tan(C)$ | Yes | No |
| B) $9 \tan(B)$ | Yes | No |
| C) $15 \sin(C)$ | Yes | No |
| D) $15 \cos(C)$ | Yes | No |



6. Andrea is constructing a wooden ramp with angle of elevation 22° and height 20 inches. How long will the base of the ramp be? **Justify** your reasoning.

