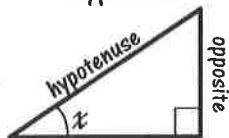


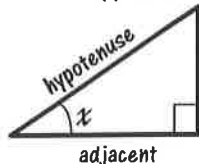
## Trigonometry.

These are the three trigonometry ratios that relate angles and sides in any right triangle:  
(You could remember them as SOH-CAH-TOA).

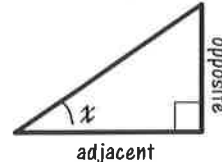
$$\sin x = \frac{\text{opposite}}{\text{hypotenuse}}$$



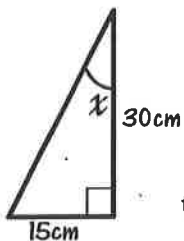
$$\cos x = \frac{\text{adjacent}}{\text{hypotenuse}}$$



$$\tan x = \frac{\text{opposite}}{\text{adjacent}}$$



Calculate the value of  $x$  and match to one of the answers. The first question has already been completed.



$$\tan x = \frac{15}{30} \therefore x = 27^\circ$$

Answers are given to the nearest whole number.

38°

41°

53°

27°

54°

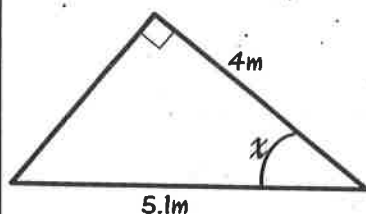
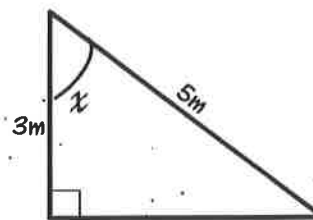
25°

64°

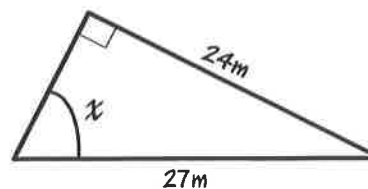
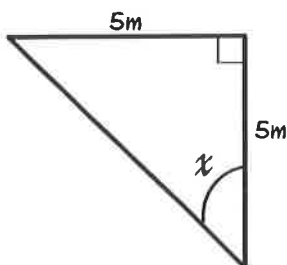
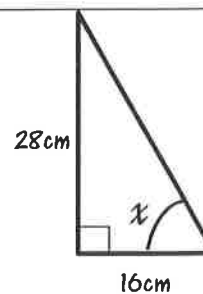
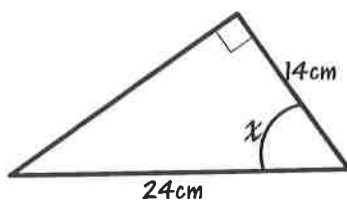
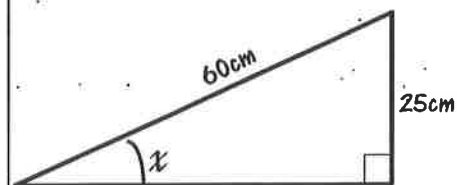
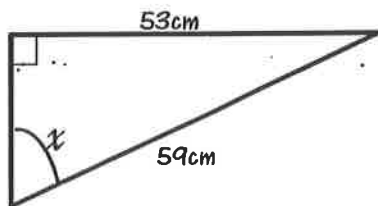
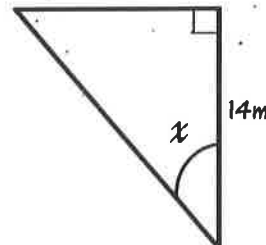
63°

45°

60°



12m.



**Practice – Trigonometric Ratios**

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

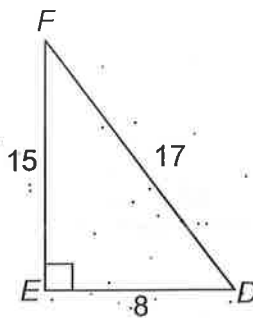
**Directions:** Answer each question, then look at the totem pole to find the answer and color the answer using the color listed.

**Use your calculator to find each trigonometric ratio. Round to the nearest hundredth.**

1. YELLOW:  $\cos 77^\circ =$  \_\_\_\_\_
2. BLUE:  $\tan 14^\circ =$  \_\_\_\_\_
3. GREEN:  $\sin 55^\circ =$  \_\_\_\_\_

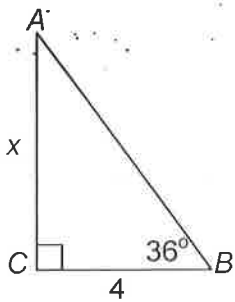
**Write each trigonometric ratio as a fraction.**

4. PURPLE:  $\sin D =$  \_\_\_\_\_
5. ORANGE:  $\cos D =$  \_\_\_\_\_
6. BLACK:  $\tan D =$  \_\_\_\_\_
7. ORANGE:  $\sin F =$  \_\_\_\_\_
8. PURPLE:  $\cos F =$  \_\_\_\_\_
9. BROWN:  $\tan F =$  \_\_\_\_\_

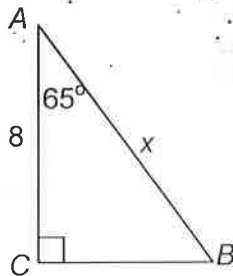


**Find the length indicated. Round to the nearest hundredth.**

10. YELLOW: Find AC.



11. RED: Find AB.



12. RED: When a child flying a kite has let out 50 meters of string, the string makes an angle of  $55^\circ$  with the ground. How high is the kite?

