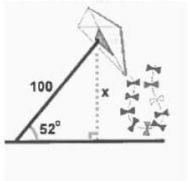
Triangles Test

Thursday, March 26, 2026 7:32 AM

1 A 100 foot string attached to a kite makes a 52° angle with the ground. What is the height of the kite to the nearest foot?



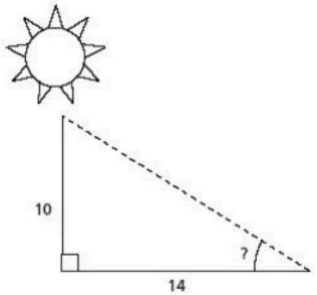
(A) 62

(B) 127

(C) 79

(D) 162

2 Find the angle measure below. Round to the nearest degree.



(A) 71°

(B) 36°

(C) 0.012°

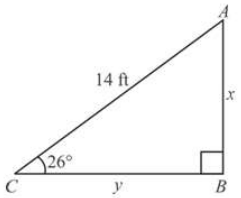
(D) 46°

(E) 55°

3 Part A

Ron wants to build a ramp with a length of $14\ ft$ and an angle of elevation of 26°.

The height of the ramp is about _____ feet.



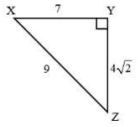
Note: Round your answer to the nearest tenth.

Part B

The length of the base of the ramp is about ____ feet.

Note: Round your answer to the nearest tenth.

4 Match the ratios for $\sin X$, $\cos X$ and $\tan X$.



$\sin X$	
$\cos X$	
$\tan X$	

DRAG & DROP THE ANSWER

$\frac{7}{9}$

$\frac{4\sqrt{2}}{9}$

$\frac{4\sqrt{2}}{7}$

5 For $\angle Z$, create trig ratios for sin, cos, and tan:

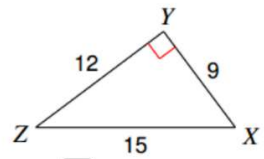
DRAG & DROP THE ANSWER

9

12

15

Note: Use CTRL+D to drag the option via keyboard



$\sin(Z) = \frac{\square}{\square}$ $\cos(Z) = \frac{\square}{\square}$

$\tan(Z) = \frac{\square}{\square}$

6 Label each side as opposite, adjacent, or hypotenuse:

DRAG & DROP THE ANSWER

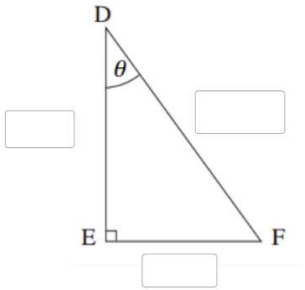
DRAG & DROP THE ANSWER

Opposite

Adjacent

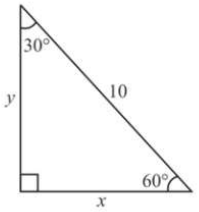
Hypotenuse

Note: Use CTRL+D to drag the option via keyboard



7 A $30° - 60° - 90°$ triangle is shown below. Find the value of x and y.

x= y=



8 Drag and drop the correct side values for the 45-45-90 triangle:

DRAG & DROP THE ANSWER

6

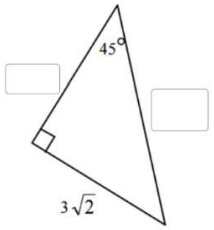
3

$3\sqrt{2}$

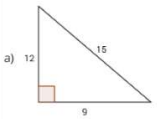
$6\sqrt{2}$

9

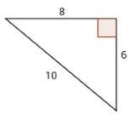
Note: Use CTRL+D to drag the option via keyboard



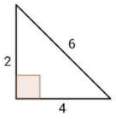
9 **Directions - For the following triangles, use the Pythagorean Theorem to determine if the values would form right triangles or not.**

a) 

Is it a right triangle?

b) 

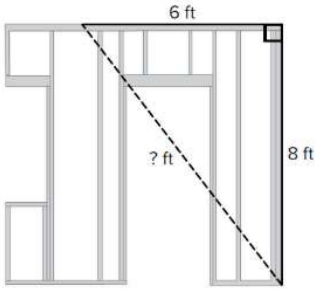
Is it a right triangle?

c) 

Is it a right triangle?

10

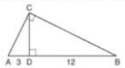
To ensure walls are square (i.e. angles are 90°), carpenters sometimes measure both directions from a corner. If a carpenter measures 8 feet along the vertical side and 6 feet along the horizontal side and makes a mark at both of these spots, what should the distance between the marks be if the wall is square?



_____ feet

11

A In the diagram below of right triangle ABC, *altitude* $\overline{CD}$ *is drawn to hypotenuse* $\overline{AB}$.



If AD=3 and DB=12, what is the length of the altitude $\overline{CD}$? CD=

B *In right triangle* ABC, $m\angle C = 90$, D *is a point on* $\overline{AB}$ *and* $\overline{CD} \perp \overline{AB}$. *If* $AB = 20$ *and* $AD = 6$, *the length of* AC *is*

C. In right triangle ABC, shown in the diagram below altitude $\overline{BD}$ is drawn to hypotenuse $\overline{AC}$, $CD = 12$, *and* $AD = 3$. *What is the length of* $\overline{AB}$?

The length of AB=