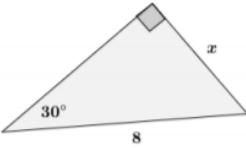
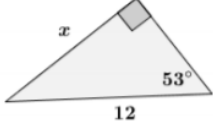

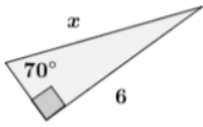
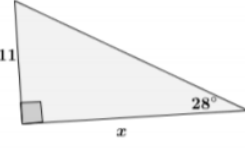
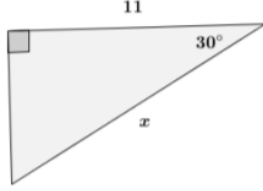

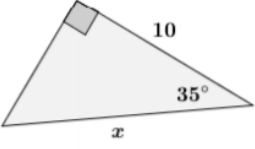
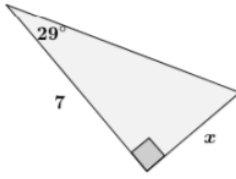


### How do you fire a math teacher?

Instructions: Use SOHCAHTOA to solve for the unknown side and match your answer to the answer bank below

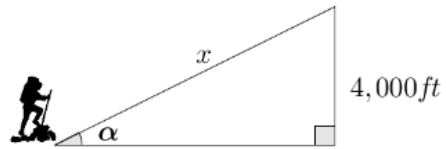
<p>1.)</p> 	<p>2.)</p> 	<p>3.)</p> 
<p>4.)</p> 	<p>5.)</p> 	<p>6.)</p> 

<p>7.)</p> 	<p>8.)</p> 	<p>9.)</p> 
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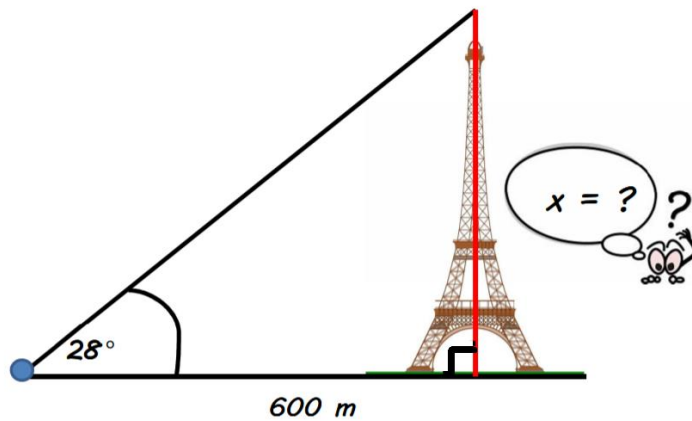
$x = 6.39$	$x = 10.39$	$x = 9.53$
L	D	W
$x = 12.21$	$x = 4$	$x = 3.88$
S	Y	H
$x = 20.69$	$x = 12.70$	$x = 5.64$
R	T	P
$x = 9.58$	$x = 7.8$	$x = 12$
E	O	I

$\overline{6}$ 
 $\overline{2}$ 
 $\overline{4}$ 
 $\overline{4}$ 
 $\overline{9}$ 
 $\overline{2}$ 
 $\overline{5}$ 
 $\overline{8}$ 
 $\overline{9}$ 
 $\overline{2}$ 
 $\overline{8}$ 
 $\overline{9}$ 
 $\overline{3}$ 
 $\overline{8}$ 
 $\overline{6}$ 
 $\overline{7}$ 
 $\overline{5}$ 
 $\overline{1}$

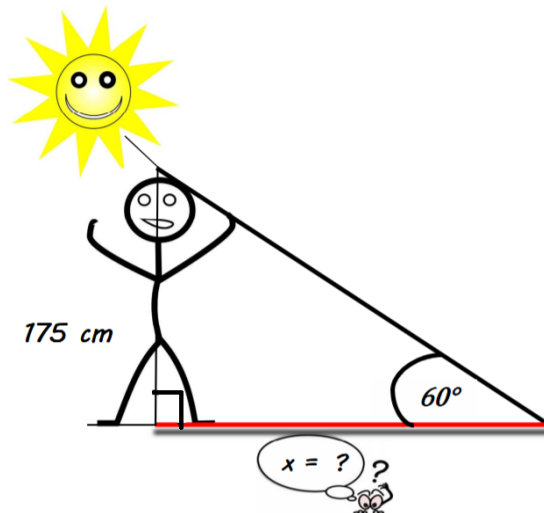
1.) A hiker sets out to climb a mountain with a 4,000 ft vertical ascent as shown in the diagram below. If the angle of incline,  $\alpha = 12^\circ$  what is to total distance he has to travel to reach the summit, to the nearest whole foot?



2. Determine the height of the Eiffel Tower, knowing that at 600m away and you can see the top at an angle of  $28^\circ$ .

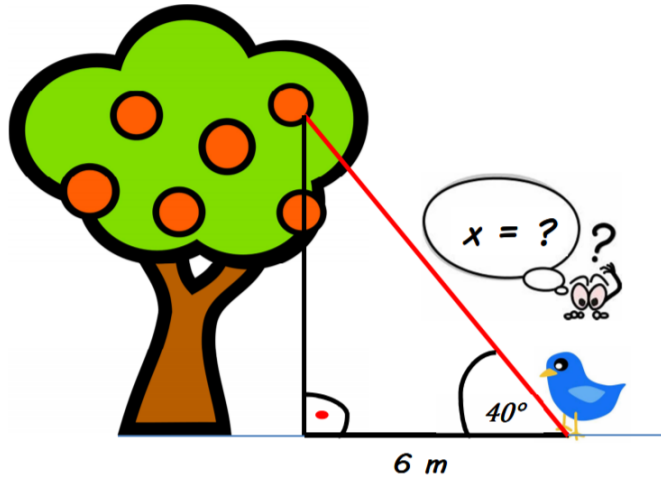


3. How long of a shadow does a 175cm tall person cast with the sun  $60^\circ$  in the sky?

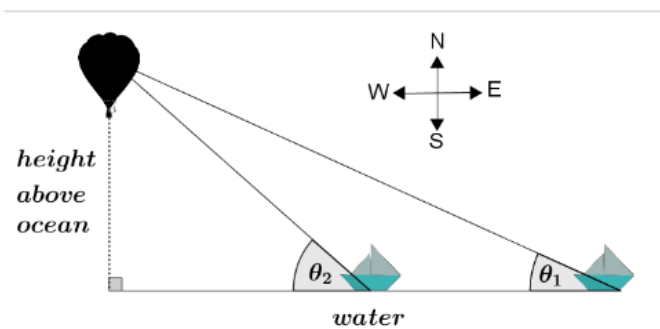


## Task 4

How far does the bird have to fly to reach the apple in the tree?



5.) A hot air balloon sits in a fixed position as a boat travels due westward towards the balloon, as in the diagram below. A sailor notices that the balloon *appears* higher in the sky as the boat travels west. If the balloon is 2.5 kilometers above the ocean, and  $\theta_1 = 25^\circ$  at 3 PM and  $\theta_2 = 40^\circ$  at 5 PM how fast is the boat traveling?



6 ) Four major US cities are shown on a map that is approximately drawn to scale below. If the distance between Boston and Los Angeles is approximately 3010 miles, what is the best approximation to the distance between New Orleans and Miami?

