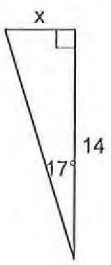
#11 Name_____

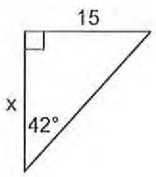
Finding Missing Side Practice

Find the missing side. Round to the nearest tenth.

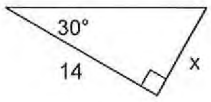
1)



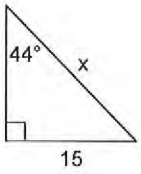
2)



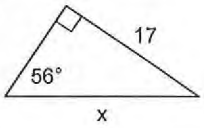
3)



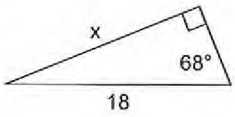
4)



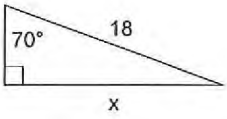
5)



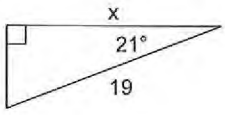
6)



7)



8)



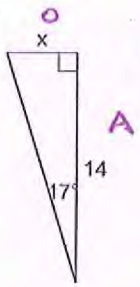
9) A slide 4m long makes an angle of 27° with the ground. How high is the top of the slide above the ground?

10) Peter needs a ladder to get to his roof for a repair. In order for the ladder to be the most stable, it must be positioned at a 30° angle. If his roof is 20 feet off the ground, how long must his ladder be?

#11 Name Key

Finding Missing Side Practice

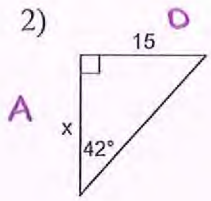
Find the missing side. Round to the nearest tenth.

1) 

$14 \cdot \tan 17° = \frac{x}{14} \cdot 14$

$14 \cdot \tan 17 = x$

$4.3 = x$

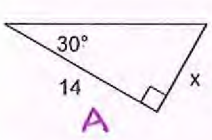
2) 

$x \cdot \tan 42° = \frac{15}{x} \cdot x$

$x \cdot \tan 42° = 15$

$x = \frac{15}{\tan 42°}$

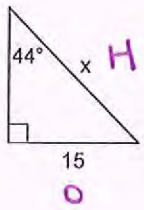
$x = 16.7$

3) 

$14 \cdot \tan 30° = \frac{x}{14} \cdot 14$

$14 \cdot \tan 30° = x$

$8.1 = x$

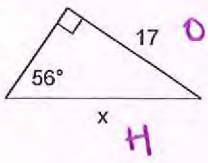
4) 

$x \cdot \sin 44° = \frac{15}{x} \cdot x$

$x \cdot \sin 44° = 15$

$x = \frac{15}{\sin 44}$

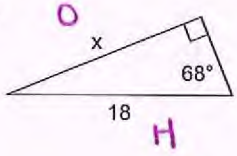
$x = 21.6$

5) 

$x \cdot \sin 56° = \frac{17}{x} \cdot x$

$x \cdot \sin 56 = 17$

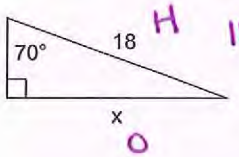
$x = \frac{17}{\sin 56} = 20.5$

6) 

$18 \cdot \sin 68° = \frac{x}{18} \cdot 18$

$18 \cdot \sin 68 = x$

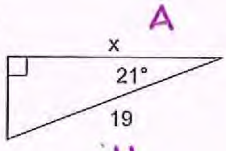
$16.7 = x$

7) 

$18 \cdot \sin 70° = \frac{x}{18} \cdot 18$

$18 \cdot \sin 70° = x$

$16.9 = x$

8) 

$19 \cdot \cos 21° = \frac{x}{19} \cdot 19$

$19 \cdot \cos 21° = x$

$17.7 = x$

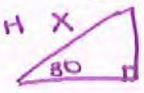
9) A slide 4m long makes an angle of 27° with the ground. How high is the top of the slide above the ground?

$4 \cdot \sin 27° = \frac{x}{4} \cdot 4$

$4 \cdot \sin 27 = x$

$1.8 = x$

10) Peter needs a ladder to get to his roof for a repair. In order for the ladder to be the most stable, it must be positioned at a 30° angle. If his roof is 20 feet off the ground, how long must his ladder be?



$x \cdot \sin 30° = \frac{20}{x} \cdot x$

$x \cdot \sin 30° = 20$

$x = \frac{20}{\sin 30} = 40$