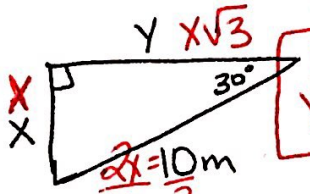
Practice W.S.

Name Key

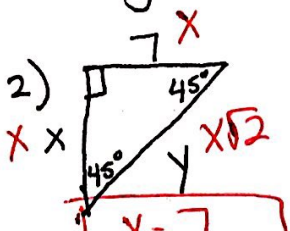
Use special right triangles to solve for x and y.

1) 

$\frac{2x}{2} = \frac{10m}{2}$

$x = 10$

$\boxed{x = 10 \quad y = 10\sqrt{3}}$

2) 

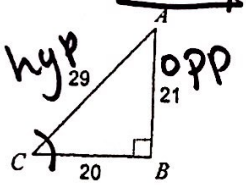
$\boxed{x = 7 \quad y = 7\sqrt{2}}$

3) 

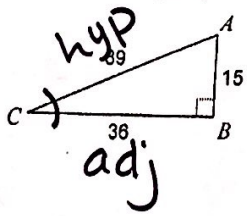
$\boxed{x = 12}$

Find the value of each trigonometric ratio. Express your answer as a fraction in lowest terms.

4) $\sin C = \boxed{\frac{21}{29}}$



5) $\cos C = \frac{36}{39} = \boxed{\frac{12}{13}}$



Find the value of each trigonometric ratio to the nearest ten-thousandth.

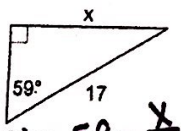
6) $\sin 62° = .882947593$

$\boxed{.8829}$

7) $\cos 60°$

$\boxed{.5}$

Find the missing side. Round to the nearest tenth.

8) 

trig: $\sin 59 = \frac{x}{17}$

$(17) \cdot .8572 = \frac{x}{17}(17)$

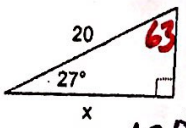
$\boxed{x = 14.6}$

Law of Sines

$\frac{\sin 90}{17} = \frac{\sin 59}{x}$

$\frac{x \sin 90}{\sin 90} = \frac{17 \sin 59}{\sin 90}$

$\boxed{x = 14.6}$

9) 

Trig:

$\cos 27 = \frac{x}{20}$

$(20) \cdot .8910 = \frac{x}{20}(20)$

$\boxed{17.8 = x}$

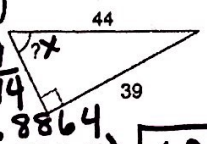
Law of Sines

$\frac{\sin 90}{20} = \frac{\sin 63}{x}$

$\frac{20 \sin 63}{\sin 90} = \frac{x \sin 90}{\sin 90}$

$\boxed{17.8 = x}$

Find the measure of the indicated angle to the nearest degree.

10) 

Trig

$\sin x = \frac{39}{44}$

$\sin x = .8864$

$\sin^{-1}(.8864) = \boxed{62.4}$

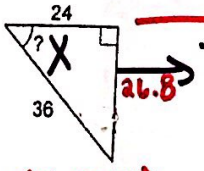
Law of Sines

$\frac{\sin 90}{44} = \frac{\sin x}{39}$

$\frac{44 \sin x}{44} = \frac{39 \sin 90}{44}$

$\sin x = .8864 \rightarrow \sin^{-1}(.8864)$

$\boxed{= 62.4}$

11) 

Trig

$\cos x = \frac{24}{36}$

$\cos x = .6667$

$\cos^{-1}(.6667)$

$\boxed{48.2}$

Law of Sines

$\frac{\sin 90}{36} = \frac{\sin x}{26.8}$

$\frac{26.8 \sin 90}{36} = \frac{36 \sin x}{36}$

$.7454 = \sin x$

$\sin^{-1}(.7454)$

$\boxed{48.2}$

Find each angle measure to the nearest degree.

12) $\sin X = 0.7547$

$\sin^{-1}(.7547)$

$\boxed{49°}$

13) $\cos Y = 0.5736$

$\cos^{-1}(.5736)$

$\boxed{55°}$