

### Unit 3 Test Review

This review requires **NO** Calculator

1. Determine the ratios for each trig function.

$$\sin A = \frac{8}{17}$$

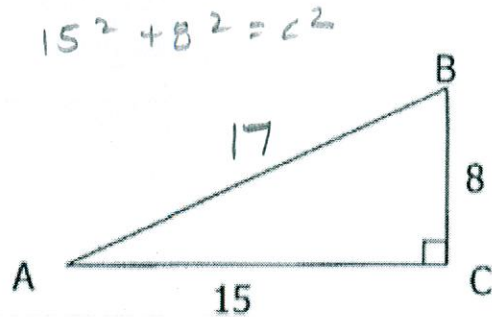
$$\cos A = \frac{15}{17}$$

$$\tan A = \frac{8}{15}$$

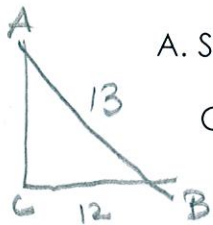
$$\sin B = \frac{15}{17}$$

$$\cos B = \frac{8}{17}$$

$$\tan B = \frac{15}{8}$$



2. Determine the co-function ratios for each trig function for triangle ABC. Remember the  $\sin \theta = \cos (90 - \theta)$



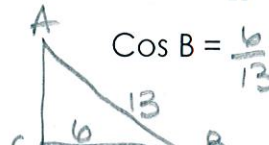
A.  $\sin A = \frac{12}{13}$

$\cos B = \frac{12}{13}$



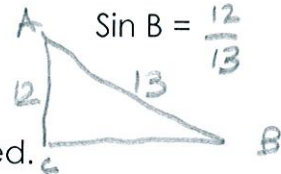
B.  $\cos B = \frac{5}{3}$

$\sin A = \frac{3}{5}$



C.  $\sin A = \frac{6}{13}$

$\cos B = \frac{6}{13}$



D.  $\cos A = \frac{12}{13}$

$\sin B = \frac{12}{13}$

3. Solve for x using trig functions. Leave your answer unsimplified.

A.  $\tan 25 = \frac{x}{10}$   
 $10 \tan 25 = x$

B.  $\sin 46 = \frac{8}{x}$   
 $x = \frac{8}{\sin 46}$

C.  $\cos 54 = \frac{12}{x}$   
 $12 \cos 54 = x$

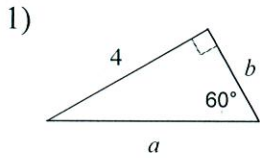
D.  $\sin x = \frac{51}{55}$   
 $\sin^{-1}(\frac{51}{55}) = x$

E.  $\tan x = \frac{8}{20}$   
 $\tan^{-1}(\frac{8}{20}) = x$

F.  $\cos x = \frac{8}{17}$   
 $\cos^{-1}(\frac{8}{17}) = x$

Special Right Triangle Review

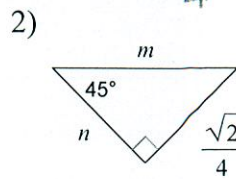
Find the missing side lengths. Leave your answers as radicals in simplest form.  
**NO CALCULATOR NEEDED**



$$\frac{4}{\sqrt{3}} = \frac{x\sqrt{3}}{\sqrt{3}}$$

$$\frac{4\sqrt{3}}{3} = b$$

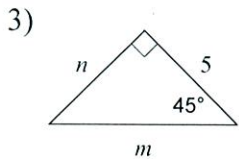
$$\frac{8\sqrt{3}}{3} = a$$



$$m = \frac{\sqrt{2}}{4} \cdot \sqrt{2}$$

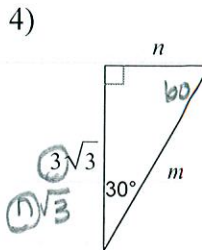
$$n = \frac{\sqrt{2}}{4}$$

$$m = \frac{1}{2}$$



$$n = 5$$

$$m = 5\sqrt{2}$$

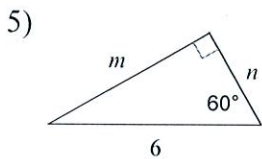


$$n = 3$$

$$m = 6$$

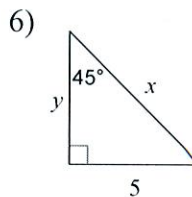
$$\textcircled{1} \sqrt{3}$$

$$\textcircled{2} 3\sqrt{3}$$



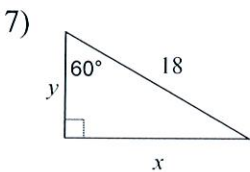
$$n = 3$$

$$m = 3\sqrt{3}$$



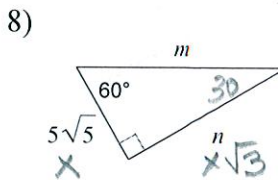
$$y = 5$$

$$x = 5\sqrt{2}$$



$$y = 9$$

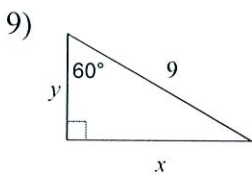
$$x = 9\sqrt{3}$$



$$n = 5\sqrt{5} \cdot \sqrt{3}$$

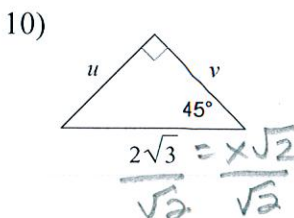
$$= 5\sqrt{15}$$

$$m = 10\sqrt{5}$$



$$y = 3$$

$$x = 3\sqrt{3}$$



$$u \text{ and } v = \frac{2\sqrt{6}}{2} = \sqrt{6}$$

$$\frac{2\sqrt{3}}{\sqrt{2}} = \frac{x\sqrt{2}}{\sqrt{2}}$$