

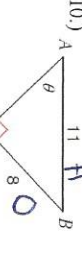
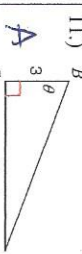
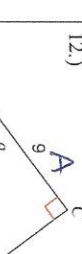
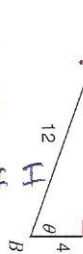


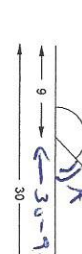

I. Find the value of angle θ . Round to the nearest degree.

- 1.) $\cos \theta = 0.1736 \rightarrow \underline{80^\circ}$ 2.) $\sin \theta = 0.9511 \rightarrow \underline{72^\circ}$ 3.) $\tan \theta = 0.6249 \rightarrow \underline{32^\circ}$

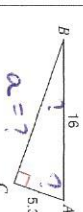

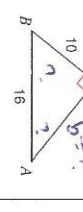

II. Evaluate the following using the definitions of the inverse trig ratios.

- 4.) $\cos^{-1}(\cos \frac{2}{3}) \rightarrow \underline{\frac{2}{3}}$ 5.) $\sin^{-1}(\sin 0) \rightarrow \underline{0}$ 6.) $\tan^{-1}(\tan 1) \rightarrow \underline{1}$
 7.) $\sin^{-1}(\frac{4}{12}) \rightarrow \underline{\frac{1}{3}}$ 8.) $\cos^{-1}(\cos \frac{\sqrt{3}}{2}) \rightarrow \underline{\frac{1}{2}}$ 9.) $\tan^{-1}(\tan \frac{\sqrt{2}}{2}) \rightarrow \underline{\frac{1}{2}}$

III. Find the measure of angle θ (use the appropriate letter). Round to nearest tenth. Show work!

10.) 	11.) 	12.) 
$\sin A = \frac{8}{11}$ $A = \sin^{-1}(\frac{8}{11})$ $A = 46.7^\circ$	$\tan B = \frac{8}{3}$ $B = \tan^{-1}(\frac{8}{3})$ $B = 69.4^\circ$	$\cos A = \frac{11.2}{9}$ $A = \cos^{-1}(\frac{11.2}{9})$ $A = 36.5^\circ$
13.) 	14.) 	15.) 
$\cos B = \frac{4}{12}$ $B = \cos^{-1}(\frac{4}{12})$ $B = 70.5^\circ$	$\sin A = \frac{13.1}{15.9}$ $A = \sin^{-1}(\frac{13.1}{15.9})$ $A = 55.5^\circ$	$\tan B = \frac{11}{14}$ $B = \tan^{-1}(\frac{11}{14})$ $B = 38.2^\circ$
16.) 	17.) 	
$\cos A = \frac{26}{9}$ $A = \cos^{-1}(\frac{26}{9})$ $A = 36.1^\circ$	$\tan B = \frac{32}{18}$ $B = \tan^{-1}(\frac{32}{18})$ $B = 60.6^\circ$	
② $\theta = 150 - 36.1$ $\theta = 113.9^\circ$	③ $\theta = 180 - 60.6 - 50$ $\theta = 69.4^\circ$	

IV. Solve each triangle. Round all answers to nearest tenth. Show all of your work!!

18.) 	19.) 	20.) 	21.) 
$a = ?$ $A = 70^\circ$ $C = 70^\circ$	$C = 70^\circ$ $c = ?$ $b = ?$	$b = ?$ $B = ?$ $A = ?$	$C = ?$ $c = ?$ $B = ?$
① $a^2 + 5.3^2 = 16^2$ $a^2 = 227.91$ $a = 15.1$	① $9.7^2 + 11^2 = c^2$ $c^2 = 215.09$ $c = 14.7$	① $10^2 + 16^2 = b^2$ $b^2 = 156$ $b = 12.5$	① $11^2 + 3^2 = c^2$ $c^2 = 130$ $c = 11.4$
② $\cos A = \frac{5.3}{16}$ $A = 70.7^\circ$ $B = 19.3^\circ$	② $\tan A = \frac{11}{9.7}$ $A = 48.5^\circ$ $B = 41.4^\circ$	② $\sin A = \frac{16}{b}$ $A = 38.7^\circ$ $B = 51.3^\circ$	② $\tan A = \frac{3}{11}$ $A = 15.5^\circ$ $B = 74.5^\circ$
③ $8^2 + 13^2 = c^2$ $c^2 = 233$ $c = 15.3$	③ $11^2 + b^2 = 15.7^2$ $b^2 = 125.49$ $b = 11.2$	③ $9.7^2 + 17^2 = c^2$ $c^2 = 353.09$ $c = 18.8$	③ $8^2 + b^2 = 18^2$ $b^2 = 260$ $b = 16.1$
④ $\tan A = \frac{13}{8}$ $A = 31.6^\circ$ $B = 58.4^\circ$	④ $\sin A = \frac{11}{15.7}$ $A = 44.5^\circ$ $B = 45.5^\circ$	④ $\tan A = \frac{17}{9.7}$ $A = 60.3^\circ$ $B = 29.7^\circ$	④ $\sin A = \frac{8}{16.1}$ $A = 29.4^\circ$ $B = 60.6^\circ$