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I. Complete the chart below about each given right triangle. Keeps answers completely simplified!

Given Right Triangle	Work to Find Missing Side	THREE trig ratios for angle $\theta$
1.)	$X = 15$	$\sin \theta = \frac{4}{5}$ $\cos \theta = \frac{3}{5}$ $\tan \theta = \frac{4}{3}$
2.)	$X = 9\sqrt{5}$	$\sin \theta = \frac{4\sqrt{5}}{9}$ $\cos \theta = \frac{1}{9}$ $\tan \theta = 4\sqrt{5}$
3.)	$X = 7$	$\sin \theta = \frac{15}{25}$ $\cos \theta = \frac{2\sqrt{5}}{5}$ $\tan \theta = \frac{3}{2}$
4.)	$X = 10$	$\sin \theta = \frac{16}{25}$ $\cos \theta = \frac{13}{25}$ $\tan \theta = \frac{16}{13}$

II. Complete the chart below each given ratio. Make sure to label angle  $\theta$  on the given triangle.

Given Trig Ratio	Label $\Delta$ and Work for Missing Side	Other TWO triangle ratios for angle $\theta$
5.) $\sin \theta = \frac{5}{13}$		$\cos \theta = \frac{12}{13}$ $\tan \theta = \frac{5}{12}$
6.) $\cos \theta = \frac{\sqrt{17}}{9}$		$\sin \theta = \frac{8}{9}$ $\tan \theta = \frac{8\sqrt{17}}{17}$
7.) $\tan \theta = \frac{4\sqrt{2}}{7}$		$\sin \theta = \frac{4\sqrt{2}}{9}$ $\cos \theta = \frac{7}{9}$

III. Find the length of missing side  $x$ . Must show work!

8.)	9.)	10.)	11.)
$X = 12.9$	$X = 8.9$	$X = 7.9$	$X = 4.9$

IV. Solve each triangle below. Must show work!

12.)	13.)	14.)	15.)
$A = 64^\circ$ $a = 4.5$ $b = 2.2$	$B = 34.7^\circ$ $a = 13.4$ $c = 16.3$	$A = 48^\circ$ $a = 11.9$ $b = 10.7$	$B = 28^\circ$ $b = 6$ $c = 12.8$

V. Determine the value of side  $x$ . Must show work!

16.)	17.)	18.)
$X = 16.9$	$X = 24.5$	$X = 9.7$