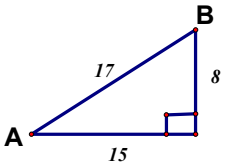
Geometry Trig Test Review Name_____
Moody Date_____Pd___

Part 1: "Set up" the ratios using the triangle pictured:

1. $\sin \measuredangle A =$ _____ 8/17
2. $\cos \measuredangle A =$ _____ 15/17
3. $\tan \measuredangle B =$ _____ 15/8



Part 2: Fill in the blanks (Assume Angle *A* and Angle *B* are acute)

4. $\sin 20^\circ = \cos 70^\circ$; $\cos 55^\circ = \sin 35^\circ$; $\sin A^\circ = \cos B^\circ$ if A + B = 90.
5. $\sin A^\circ = \cos A^\circ$ only if A=45 deg..
6. For any acute angle A, $\sin A < 1$ and $\cos A < 1$.

(Use a calculator to answer the following☺

7. $\sin 23^\circ \approx 0.3907$ 8. $\tan 85^\circ \approx 11.4301$ 9. $\cos 37.9^\circ \approx 0.7891$

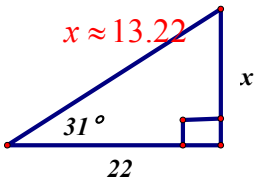
Part 3: Solve for x in each ratio:

10. $\cos 25^\circ = \frac{x}{9}$ 11. $\sin 68^\circ = \frac{14}{x}$ 12. $\tan x^\circ = \frac{13}{9}$

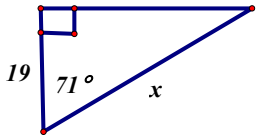
10. $x \approx 8.16$ 11. $x \approx 15.10$ 12. $x \approx 55.30^\circ$

Part 4: Set up an appropriate ratio and then solve for *x*.

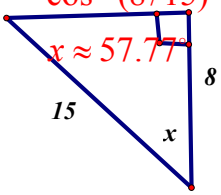
13. $\tan 31 = \frac{x}{22}$
$x \approx 13.22$



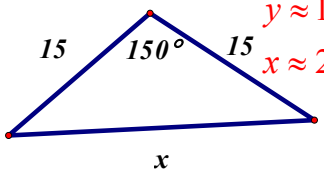
14. $\cos 71 = \frac{19}{x}$
$x \approx 58.36$



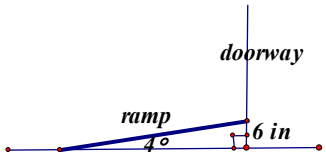
15. $\cos^{-1}(8/15)$
$x \approx 57.77$



16. $\sin 75 = \frac{y}{15}$
$y \approx 14.49$
$x \approx 28.98$



19. The owner of a store builds a ramp to make his store wheelchair accessible. If the angle that the ramp makes with the ground needs to be 4° and the doorway is 6" off of the ground, how long does the ramp need to be?



$\sin 4^\circ = 6/x$: $x \approx 86$ *inches*

17. Find the angle of elevation of a tower that is 200 feet tall and 500 feet away from the viewer. $\tan^{-1}(200/500) \approx 21.8^\circ$

18. A pilot, with an angle of depression of 40°, sees a football field. Staying at the same altitude, the plane flies 4875 feet until it flies directly over the field. What is the altitude of the plane? $\tan 40 = (x/4875)$; $x \approx 4090.6\,ft.$