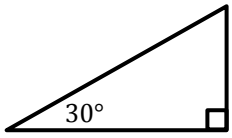
Math 3 Unit 8 Worksheet 4 **Name:**_____
Solving Trig Equations for angles $0° \le \theta < 360°$ **Date:**_____ **Per:**_____
**** Scientific calculator <u>not</u> allowed. ****

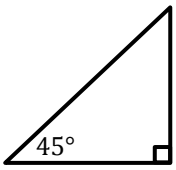
[1-10]: Identify all of the possible quadrants in which the terminating ray for θ could lie.

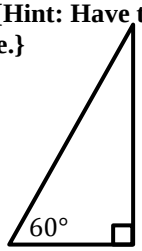
1. $\cos\theta > 0$
2. $\sin\theta > 0$
3. $\tan\theta > 0$
4. $\cos\theta < 0$
5. $\sin\theta < 0$

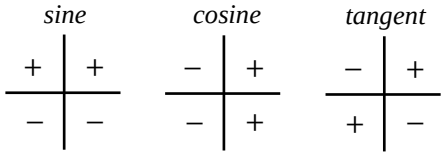
6. $\tan\theta < 0$
7. $cos^2\theta > 0$
8. $sin^2\theta > 0$
9. $tan^2\theta < 0$
10. $tan^2\theta > 0$

[11-21]: Solve for all values of θ such that $0° \le \theta < 360°$. {Hint: Have the special right triangles handy, and keep in mind the quadrants where sine/cosine/tangent are positive vs negative.}









11. $2\sin\theta - 1 = 0$
12. $2\cos\theta + 1 = 0$
13. $5\tan\theta + 5 = 0$

14. $\sqrt{3}\tan\theta - 1 = 0$
15. $2cos^2\theta - 1 = 0$
16. $tan^2\theta - 3 = 0$

17. $4sin^2\theta - 1 = 0$

18. $4cos^2\theta - 3 = 0$

19. $3tan^2\theta + 1 = 0$

20. $(2\sin\theta + \sqrt{3})(\sqrt{2}\sin\theta - 1) = 0$

21. $(\tan\theta + \sqrt{3})(\tan\theta - 1) = 0$

[22]: Review

22. If $\tan A = \frac{3}{4}$, then find the perimeter and the area for isosceles ΔABC.