Name_____

TRIGONOMETRY JOURNAL
INVERSE TRIG FUNCTIONS AND TRIG EQUATIONS

1. a) An inverse trig function represents _____.

    b) When working with inverse trig functions, angles are always expressed in _____.

    c) When working with inverse trig functions, fourth quadrant angles are always expressed as

    _____.

2. _____ and _____ are both notations for inverse cosine.

3. When the inverse trig function is capitalized, this indicates that _____

    _____ should be used.

4. When working with inverse trig functions, an example problem that results in an angle as the

    answer is _____ while an example problem that results

    in a value as the answer is _____.

5. The steps for solving an inverse trig equation are:

    1) _____

    2) _____

    3) _____

6. What is the solution to an inverse trig equation if after Step 1 above, the following results: $\text{Tan}^{-1} x = \frac{2\pi}{3}$?

    _____ Why?_____

7. When solving trig equations, the two situations that require you to check your answers are _____

    _____.

8. When solving a trig equation, why does your calculator give you the following answers when you ask
    it to find an angle?

    $\sin x = -\frac{\sqrt{3}}{2}$ Answer: $-60°$ *(rather than 300°)* _____

    $\cos x = -\frac{\sqrt{2}}{2}$ Answer: $135°$ *(rather than 300°)* _____

9. When solving trig equations, you should substitute in identities when you have _____

    _____ or _____.

10. (a) If a trig equation contains double angles *(or another multiple angle such as 3x or x/2),* you

    should solve for angle $2x$ and divide the answers by 2 when the problem has _____

    _____.

    (b) In a problem like (a), why can you potentially have 4, 6, 8 or more solutions?_____

    _____

11. List the Quadrants where the inverse trig functions are defined.