This is not a real quiz, and it will not be graded. If I gave a quiz on inverse trig functions, it would look like this. (Well, this is a bit longer than what I would give you as a quiz.)

- 1. (4 points) Answer the following True or False questions. Write out the entire word; if I can't read it, I can't grade it.
  - (a) \_\_\_\_\_ The function  $\arcsin(x)$  is the inverse function to  $\sin(x)$ .
  - (b) \_\_\_\_\_ It is true that arctan(x) = arcsin(x) / arccos(x).
  - (c) \_\_\_\_\_ It is true that  $\arcsin^2(x) + \arccos^2(x) = 1$
  - (d) \_\_\_\_\_ It is true that  $\sin(\arcsin(x)) = x$
- 2. (4 points) A right triangle has an angle  $\theta$ . The opposite side is length 4, and the adjacent side is 7.
  - (a) Draw the triangle, labeling known sides and angles.
  - (b) What is the angle  $\theta$ , measured in radians?

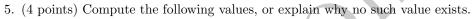
- 3. Consider the line y = 12x 5
  - (a) Draw the graph of y = 12x 5, and label the angle this graph makes with the x-axis with the letter  $\theta$ .

(b) Determine  $\theta$ . (Hint: Draw a vertical line.)

4. (5 points) Find all the values of  $\theta$  that satisfy the following equations:

(a) 
$$\cos^2(2\pi \cdot \theta) + 2\cos(2\pi \cdot \theta) + 1 = 0$$

(b) 
$$\ln(\sin(\theta)) - \ln(\cos(\theta)) = 4$$



(a) 
$$\sin(\arcsin(\pi/3))$$

(b) 
$$tan(arcsin(0.5))$$

6. If  $\arcsin(x) < 0$ , what quadrant does  $\arcsin(x)$  lie in?