

Math 1155, Fall 2009, Worksheet 2

1. Find the following

- a) $\sin(\arcsin(-1/2))$,
- b) $\arcsin(\sin(11\pi/6))$,
- c) $\sin(\arcsin(-2))$.

2. Find the following

- a) $\cos(\arccos(-1/2))$,
- b) $\arccos(\cos(11\pi/6))$,
- c) $\cos(\arccos -2)$.

3. Find the following

- a) $\sin(\arccos(-4/5))$,
- b) $\tan(\arccos(-4/5))$,
- c) $\cos(\arctan(-1/3))$

4. Solve the equation $6 \arcsin(2x) = 2\pi$.

5. Find the inverse function of

$$f(x) = 2 \sin(3x) - 1.$$

Also give domains and ranges for $f(x)$ and $f^{-1}(x)$.