Additional Problems Assignment 12

1. Write the following equation using inverse trig functions: $\arcsin(x), \arccos(x)$ and $\arctan(x)$:

   (a) $\sin(\theta) = \frac{3}{4}$ (Ans: $\theta = \arcsin(\frac{3}{4})$)

   (b) $\tan(x) = -2$

   (c) $\cot(\beta) = \frac{1}{2}$

2. Find each of the following:

   (a) $\arccos(\frac{\sqrt{3}}{2})$

   (b) $\arcsin(-\frac{1}{2})$

   (c) $\arccos(-\frac{1}{2})$

3. Evaluate each of the following:

   (a) $\sin(\arcsin(-\frac{1}{2}))$

   (b) $\sin(\arccos(-\frac{\sqrt{3}}{2}))$

   (c) $\sin(\arccos(\frac{4}{5}))$

   (d) $\sin(\arctan(2))$

4. Evaluate each of the following:

   (a) $\sin\left(\arcsin(\frac{5}{13}) + \arcsin(\frac{4}{5})\right)$

   (b) $\sin\left(\arcsin(\frac{1}{2}) - \arccos(\frac{1}{3})\right)$

   (c) $\tan\left(2\arcsin(\frac{4}{5}) - \arccos(\frac{12}{13})\right)$