Additional Problems Assignment 12

1. Write the following equation using inverse trig functions
   (a) $\sin(\theta) = \frac{3}{4}$ (Ans: $\theta = \arcsin(\frac{3}{4})$)
   (b) $\tan(x) = -2$
   (c) $\cot(\beta) = \frac{1}{2}$
2. Find the principal vale of 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) $\tan\left(2\arcsin(\frac{4}{5}) - \arccos(\frac{12}{13})\right)$