1. (3 points) Evaluate the following expressions:
   
   a) \( \arcsin \left( \frac{1}{2} \right) \)
   
   b) \( \cos^{-1}(-\sqrt{3}/2) \)
   
   c) \( \arctan(-\sqrt{3}) \)

   \( \alpha = \frac{\pi}{6} \)
   
   \( \beta = \frac{5\pi}{6} \)
   
   \( \gamma = -\frac{\pi}{3} \)

2. (1 point) Find the exact value of \( \sin(\arctan(\frac{3}{4})) \). Your answer should be a number and should involve any inverse trig functions.

   \( b = 5 \)

   \( \sin(\arctan(\frac{3}{4})) = \sin \theta = \frac{3}{5} \)
3. (1 point) Assume that $0 \leq x \leq \frac{1}{2}$. Write the following as an algebraic expression in $x$:

$$\tan(\arccos 2x).$$

Your answer should not involve any inverse trig functions.

\[
\begin{align*}
\theta &= \arccos 2x \\
+ & \quad 0 \leq 2x \leq 1 \\
(2x)^2 + b^2 &= 1^2 \\
& \quad \Rightarrow b = \sqrt{1 - 4x^2}
\end{align*}
\]

$$\tan(\arccos 2x) = \frac{b}{2x} = \frac{\sqrt{1 - 4x^2}}{2x}$$