1. Complete the square.
   (a) $x^2 + 4x + 5$
   
   (b) $x^2 - 2x - 3$
   
   (c) $-x^2 + 5x$

2. For $x$ between $-1/2$ and $1/2$, is $\sin^{-1}(x)$ increasing or decreasing? Why?

3. Compute the following integrals.
   (a) $\int_0^{\pi/2} \sin(2x) \, dx$
(b) \( \int \cos(x) \cdot e^{\sin(x)} \, dx \)

(c) \( \int \frac{1}{\sqrt{6x-x^2}} \, dx \)

(d) \( \int \frac{1}{x^2+4x+5} \, dx \)