1. Find the area of each region specified.
   (a) Between $y = 2\sin(x)\cos(x) + x$ and the x-axis for $0 \leq x \leq \pi$
   (b) Bounded by $y = x^3 - x$ and $y = 3x$
   (c) Between $y = \dfrac{x}{2 + x^2}$ and the x-axis for $0 \leq x \leq 3$
   (d) Between $y = \dfrac{x}{2 + x}$ and the x-axis for $0 \leq x \leq 3$

2. Evaluate the following integrals. If you cannot find an antiderivative, then estimate the value of the integral.
   (a) $\displaystyle\int_{-1}^{1} \sin(x)e^{x^2}\, dx$ (Hint: Look at the graph)
   (b) $\displaystyle\int_{-1}^{0} e^{x^2}\, dx$ (Hint: Think Taylor polynomials)