1. Evaluate the following (without a calculator):
   (a) \((-8)^{5/3}\)
   (b) \((2 - \sqrt{x})^2\)
   (c) \(\log_2(8^{1.5})\)

2. Solve for \(x\).
   (a) \(\log_2(5x - 4) = 4\)
   (b) \(\ln(x - 1) - \ln(3x + 1) = 2\)

3. Assume you take out at $10,000 loan with 1\% interest to buy a car. (Loan interest works the same as bank account interest, but you have to pay the interest instead of getting paid it). Recall: For interest compounded \(n\) times per year, the amount of money you owe after \(t\) years is

   \[ A(t) = P(1 + (r/n))^{nt} \]

   (a) Loan company 1 lets you pay back over 10 years and compounds interest monthly. Write an expression for the amount of money you pay will over 10 years. You do not need to simplify.

   (b) Loan company 2 lets you pay back over 10 years and compounds interest continuously. Write an expression for the amount of money you will pay over 10 years. You do not need to simplify.

   (c) Which should you pick and why? (extra credit)