

## **CS 10A: An introductory study of algorithms and abstractions**

### **Sample programming challenges**

#### **1) Car Type: Honda Fit**

**45 Miles per Gallon with a 13 gallon tank**

**How many miles can you drive on a full tank of gas?**

**If the current price for gas is \$3.89 per gallon what is the total cost to fill the tank?**

**How much would it cost you for every mile you drive?**

#### **2) A Box of Bigelow of Green Tea with 20 tea bags cost \$3.89 at your local Safeway store.**

**What is the cost per bag of tea?**

**Let's say Starbucks sold a cup of Bigelow Green Tea plain for \$2.25, what is the gross profit per cup?**

**What might be the other operational expenses to figure in at a later point?**

#### **3) You took an "interest free" student loan of \$6000 per year for four years.**

**If you are able to pay \$350 per month, how many months will it take for you to complete paying off the full loan?**