Name: _____
MATH 100
Fall 2021
HW 3: Due 10/06

"It's just a flesh wound."
–Black Knight, Monty Python and the Holy Grail

Problem 1. (10pt) Compute the following:

(a) 60% of 170

(b) 20% of 46

(c) 87% of 1698

(d) 174% of 19

Problem 2. (10pt) Compute the following:

(a) 60 increased by 20%

(b) 150 decreased by 35%

(c) 470 increased by 140%

(d) 38 decreased by 99%

Problem 3. (10pt) Convert the following:

(a) 150,000 in to miles [5280 ft $=$ 1 mi]

(b) 32 mi to km [1 mi $=$ 1.61 km; 1 km $=$ 1000 m]

(c) 4 mi^2 to in^2 [1 mi $=$ 0.000189394 ft]

Problem 4. (10pt) Suppose you work a job where you are paid $7.70/hr.

(a) How much do you make after working 40 hours?

(b) How much do you make after working 36.5 hours?

(c) How many *whole* hours would you have to work to make $850?

Problem 5. (10pt) Suppose you work a job where you make $9.70/hr for the first 40 regular hours you work. After that, you make time and a half, i.e. you make 50% more per hour.

(a) How much do you make if you work 35 hours in a week?

(b) How much do you make if you work 45 hours in a week?

(c) Suppose you start work at 8:41 am and leave at 4:32 pm. How much have you make that day?

Problem 6. (10pt) Suppose you work at a car dealership where you are paid on commission, i.e. you are paid based on how much you sell. The dealership pays you either a weekly salary of $830/week or 6.7% of whatever you sell that week—whichever is greater.

(a) How much are you paid if you have $8,437.26 in sales that week?

(b) How much are you paid if you have $12,775.96 in sales that week?

(c) At least how much would you have to sell (to the nearest dollar) in order to make your base-rate weekly salary?

(d) Suppose you sold deck sets that cost $245. Based on your answer from (c), how many deck sets would you have to sell each week in order to make more than your base weekly salary?