Name: _____

MATH 100

Fall 2023

HW 1: Due 09/11

Problem 1. (10pt) Compute the following:

(a) 47% of 120

(b) 96% of 55

(c) 1% of 870

(d) 130% of 94

(e) 285% of 16

Problem 2. (10pt) Compute the following:

(a) 96 increased by 12%

(b) 620 decreased by 24%

(c) 45 increased by 4%

(d) 59 increased by 108%

(e) 200 increased by 160%

Problem 3. (10pt) You are out to dinner with your friends. The check comes and you all have decided that you will pay and they will 'Venmo you.' The bill comes and it is $187.45. You will tip the server 20%.

(a) What is the tip amount?

(b) What is the total bill?

(c) If you are dividing the cost equally amongst *you and your four friends,* what is the amount each person should pay you?

Problem 4. (10pt) Suppose that Dahlia sells above ground pools. Due to inflation, she plans on raising her prices slowly. The cost of one particular above ground pool is $3,800. Over the next three months, she will raise the price 10%.

(a) Calculate the price of the pool for each of the next three months.

(b) Using your answer from (a), find by what percentage the pool price has increased.

(c) What if she had simply raised the price of the pool by 30%, what would the cost be?

(d) Are your final answers from (a) and (c) the same? Explain.

(e) By what percentage should she raise the price of the pool each month if she wants the final cost to be $4,000?