

Name: \_\_\_\_\_

**MATH 100**

**Fall 2022**

**HW 2: Due 09/19**

*"This is not yours to fix alone. You act like you're all alone out there in the world, but you're not. You're not alone"*

*–Joyce Byers, Stranger Things*

**Problem 1.** (10pt) Showing all your work, compute the following:

- (a) 55% of 143
- (b) 1% of 3.6
- (c) 49% of 49
- (d) 121% of 4000

**Problem 2.** (10pt) Showing all your work, compute the following:

- (a) 78 increased by 40%
- (b) 94 decreased by 65%
- (c) 166 decreased by 2%
- (d) 1820 increased by 163%

**Problem 3.** (10pt) Why is 80% of 485 the same value as the value obtained by reducing 485 by 20%? Be sure to give an explanation that does not simply involve computing both. Then compute both values as stated.

**Problem 4.** (10pt) Sally Forth is looking to book a vacation trip. She does not want to spend more than \$3,500 on the trip. The prices listed on the travel website she is using to book the trip do not include 7% sales tax or a \$50 booking surcharge that the website charges (applied to the cost of the trip *before* the tax). What is the highest advertised price on the website that she can book and actually afford?

**Problem 5.** (10pt) Ophelia Pane is taking a Mathematics course. For this Mathematics course, the grading scheme is as follows:

Participation	5%	Quizzes	10%
Activities	5%	Exams	30%
Project	10%	Homework	40%

Suppose she had a 90% participation average, 100% activities average, 85% project average, 75% quiz average, and 79% homework average. She received a 72% on exam 1, 89% on exam 2, and 84% on exam 3, which gave her a 81.67 exam average (because they were weighted equally). What was her finally average in the course?

**Problem 6.** (10pt) Suppose that Jim Nasium is in his first semester at college. His transcript at the end of the first semester was as follows:

Course	Letter Grade	Credits				
First-Year Seminar	A	1	A	4.0	C+	2.3
Calculus	A–	4	A–	3.7	C	2.0
Introductory Philosophy	C+	3	B+	3.3	C–	1.7
German I	B–	3	B	3.0	D	1.0
Writing I	B+	3	B–	2.7	F	0.0
American Poets	D	3				

What was Jim's GPA for his first semester? [The college's letter grade scheme is show above on the right.]