

Name: _____
MATH 108

Fall 2023
Lecture: 09/05

Linear Functions & Percentages

Problem 1. (10pt) Let $f(x)$ be the function given by $f(x) = 9 - 3x$.

- (a) Is $f(x)$ linear? Explain.
- (b) Identify the slope and y -intercept.
- (c) Find $f(5)$.
- (d) Is there an x such that $f(x) = 25$?

Problem 2. (10pt) Fahad makes \$40 every day and places it under his mattress. Currently, there is \$287 under the mattress.

- (a) Find a function, $M(d)$, for the amount of money under the mattress d days from now.
- (b) Is $M(d)$ linear? Explain.
- (c) How much does he have 10 days from now?
- (d) When will he have at least \$1,000?

Problem 3. (10pt) Compute the following:

- (a) 67% of 900
- (b) 1% of 4,200
- (c) 92% of 35
- (d) 160% of 500

Problem 4. (10pt) Compute the following:

- (a) 90 decreased by 60%
- (b) 400 increased by 17%
- (c) 621 increased by 220%