

Name: \_\_\_\_\_  
MATH 100  
Fall 2022  
HW 7: Due 10/12

*“He knows nothing, and he thinks he  
knows everything. That clearly points to  
a political career.”*

*– George Bernard Shaw*

**Problem 1.** (10pt) Define what it means to be a linear function. Then give an example of a linear function and evaluate it at some value.

**Problem 2.** (10pt) Consider the function  $f(x) = 121.5 - 11.6x$ .

- (a) Explain why  $f(x)$  is linear.
- (b) Find the slope and  $y$ -intercept of  $f(x)$ .
- (c) Find  $f(x)$  when  $x = 7.2$

**Problem 3.** (10pt) Find the equation of the linear function which passes through the points  $(-4, 10)$  and  $(6, -8)$ .

**Problem 4.** (10pt) Find the equation of the linear function with slope  $-15$  and  $y$ -intercept  $19$ .