Lesson 3: Practice Problems

1. Decide whether or not each equation represents a proportional relationship.
   a. Volume measured in cups (c) vs. the same volume measured in ounces (z): $c = \frac{1}{8}z$

   b. Area of a square (A) vs. the side length of the square (s): $A = s^2$

   c. Perimeter of an equilateral triangle (P) vs. the side length of the triangle (s): $3s = P$

   d. Length (L) vs. width (w) for a rectangle whose area is 60 square units: $L = \frac{60}{w}$

2.

   a. Clare has \$54 in her bank account. A store credits her account with a \$10 refund. How much does she now have in the bank?

   b. Mai owes the bank \$60. She gets \$85 for her birthday and deposits it into her account. How much does she now have in the bank?

   c. Tyler is overdrawn at the bank by \$180. His brother has \$70 more than him. How much money does Tyler's brother have?

   d. Andre has \$37 in his bank account and writes a check for \$87. After the check has been cashed, what will the bank balance show?

3. Last week, it rained x inches. This week, the amount of rain decreased by 5%. Which expressions represent the amount of rain that fell this week? Select all that apply.

A. $g - 0.05$ B. $g - 0.05g$ C. $0.95g$ D. $0.05g$ E. $(1 - 0.05)g$

4. The table shows five transactions and the resulting account balance in a bank account, except some numbers are missing. Fill in the missing numbers.

	transaction amount	account balance
transaction 1	200	200
transaction 2	-147	53
transaction 3	90	
transaction 4	-229	
transaction 5		0

5. Add.

a. $5\frac{3}{4} + (-\frac{1}{4})$ b. $-\frac{2}{3} + \frac{1}{6}$ c. $-\frac{8}{5} + (-\frac{3}{4})$

6. In each diagram, x represents a different value. For each diagram,

i. What is something that is definitely true about the value of x?

ii. What is something that could be true about the value of x?