

New Jersey City University
Intermediate Algebra
Peer Led Team Learning Workshop 1B
Word Problems

1. Section 2.5

Ashley has \$120,000 to invest and decides to put some in a certificate of deposit (CD) that earns 4% interest per year and the rest in a low risk stock that earns 7%.

- a. Let x represent the amount of money Ashley put in a CD. Write an expression (linear) that represents amount of interest that she will earn at the end of one year.
- b. If her plan is to earn \$7,800 from interest, how much should Ashley invest in each account?

2. Section 2.5

You are choosing between two long distance telephone plans. Plan A has a monthly fee of \$15 with a charge of \$0.08 per minute for a long distance call. Plan B has a monthly fee of \$3 with a charge of \$0.12 per minute for a long distance call. Let n represent the number of minutes of long distance calls.

- a. Write an expression for making n minutes of long distance calls under plan A.
- b. Write an expression for making n minutes of long distance calls under plan B.
- c. How many minutes of long distance calls do you have to make for the cost under the two plans to be the same?

3. Section 2.5

A bottled iced tea manufacturer saw profit increase by 65% last year over the previous year. This year, due to much new competition, profit fell 40%. The total profit over the last three years is \$17,820.00. Let x represent last year's profit.

- a. Find an expression for the profit at the end of the 1st year.
- b. Find an expression for the profit at the end of the 3rd year.
- c. Find an expression for the total profit over the last three years
- d. Calculate the profit at the end of each year.