

1) Suppose you receive \$100 for a graduation present, and you deposit it in a savings account. Then each week thereafter, you add \$5 to the account but no interest is earned. The amount in the account is a function of the number of weeks that have passed.

a) Write the equation of this function in slope-intercept form.

b) When will you have \$310 in the account?

c) How much money will you have in **two years**?

2) *The athletic department will raise money by charging admission to an upcoming football game. The price will be different for students and adults. Student tickets costs \$3 each and adult tickets cost \$5 each. The goal is to raise \$5000 from the sale of tickets to the game.*

a) Define variables that represent the unknown quantities in the problem. Then write an equation that can be used to find the number of student and adult tickets if the goal is reached.

b) Using the equation, calculate the x-intercept. What does it mean in context? Answer in a complete sentence.

c) Using the equation, calculate the y-intercept. What does it mean in context? Answer in a complete sentence.

3) You have \$25 in a book store gift card. You want to buy magazines that cost \$3 each and books that cost \$5 each. How many books can you buy if you buy 3 magazines?

Equation: _____

Solution: _____

4) A 100-point test has x questions worth 2 points apiece and y questions worth 4 points apiece. If you have 24 questions worth 4 points apiece, how many questions will be worth 2 points apiece?

Equation: _____

Solution: _____

5) Lynn is tracking the progress of her plant's growth starting today. Today the plant is 5 cm tall. The plant grows 1.5 cm per day.

a) Find an equation that represents the plants height after any given number of days.

b) How tall is the plant after 9 days?