

Graphing Real Life Scenarios: Student Loan

1. You took out a loan for \$11,000. Every month you pay \$500. Write an equation to show how much of the loan still needs to be paid off on a monthly basis.

Equation: _____ Rate of Change: _____ Initial Value: _____

x represents: _____ y represents: _____

Graph the scenario for 10 months

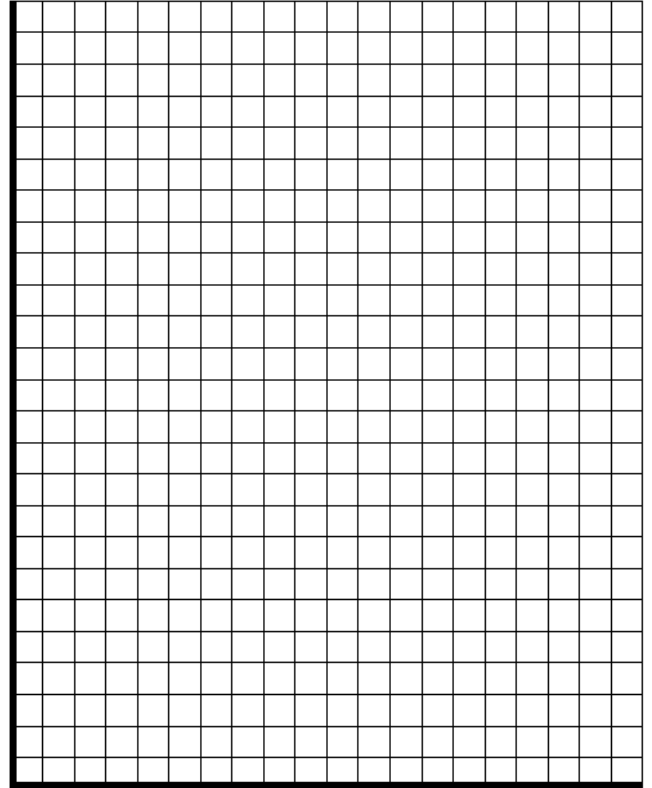
Conclusion Questions:

A. What might cause a spike or dip in the graph?

B. After a year (12 months), how much of the loan is left to be paid off?

C. If the monthly payments were \$350 a month instead of 500, how much of the loan would be left to be paid off after a year? Use an equation to solve.

Equation: _____



Graphing Real Life Scenarios: Filling the tub with water

2. Your tub holds 70 gallons of water. You fill it at a constant rate of 4 gallons per minute. (This means there is no water in the tub to begin with).

Equation: _____ Rate of Change: _____ Initial Value: _____

x represents: _____ y represents: _____ **(no graph)**

Conclusion Questions:

A. How long will it take to fill the tub completely?

B. If the tub had 20 gallons to begin with, how long would it take to fill the tub if it fills at the rate of 4 gallons per minute? Use an equation to solve.

C. If your tub could hold 90 gallons of water instead of 70, and it fills at a constant rate of 4 gallons per minute, how long would it take to fill it completely? Use an equation to solve.

Graphing Real Life Scenarios: Netflix Account

3. In order to have a Netflix membership, you need to pay a monthly fee of \$14.

Equation: _____ Rate of Change: _____ Initial Value: _____

x represents: _____ y represents: _____

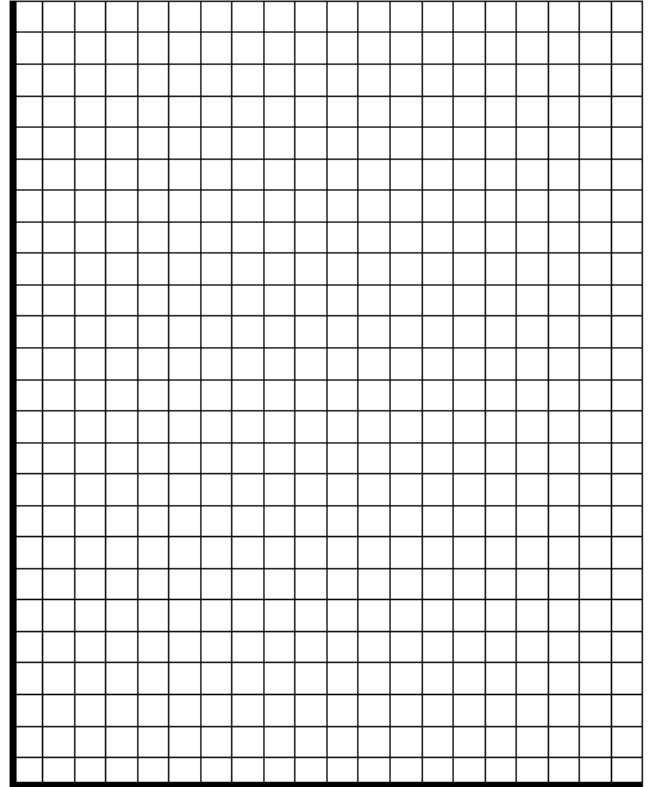
Graph the scenario for 6 months

Conclusion Questions:

A. How much money would 6 months of service cost?

B. How many months of service can you get with \$90?

C. Hulu TV charges a \$15 sign-up fee and a \$10 monthly fee. How much would 6 months of service cost with them? Graph the scenario.
Equation: _____



Graphing Real Life Scenarios: Itunes Gift Card

4. The gift card has a balance of \$120. Price per song download is \$1.50.

Equation: _____ Rate of Change: _____ Initial Value: _____

x represents: _____ y represents: _____ **(no graph)**

Conclusion Questions:

A. What would your balance be if you purchased 30 songs?

B. How many songs would you need to purchase to be left with a balance of zero?

C. If the price per song download was \$2.50 instead of \$1.50, how much songs would it take to purchase to be left with a balance of zero?