Word Problems Worksheet

Name: __Key__
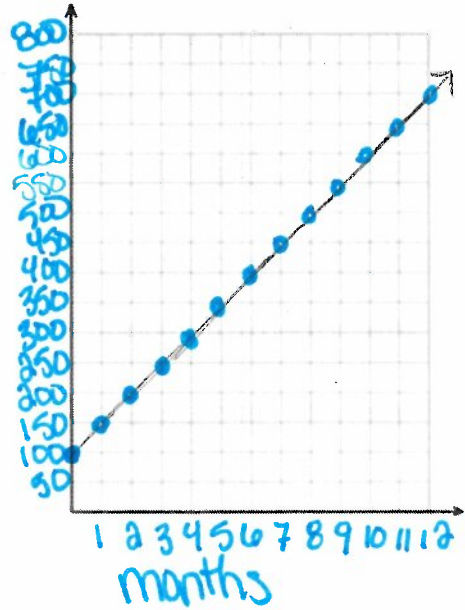
1. A cable company charges a one-time activation fee of $100 plus $50 per month for service. $b = 100$ $m = \frac{50}{1}$

   a) Graph. Don't forget to label each axis!!!

   b) Equation: $y = \frac{50}{1}x + 100$

   c) What is the total cost after 6 months?

   $400

$ (y-axis)
800 750 700 650 600 550 500 450 400 350 300 250 200 150 100 50
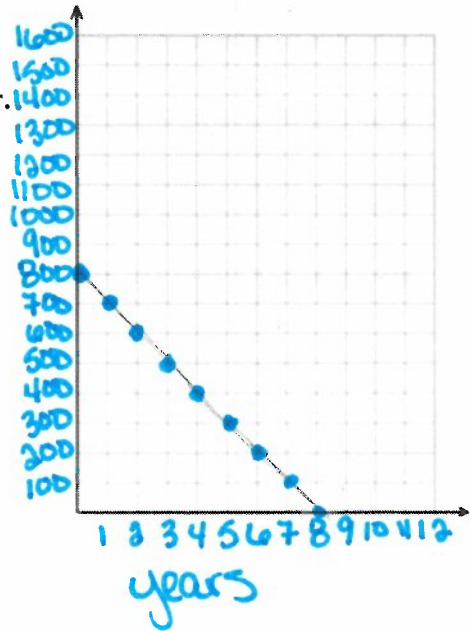1 2 3 4 5 6 7 8 9 10 11 12
months

2. After a laptop is purchased, its value decreases by $100 each year. After two years, the laptop is worth $600. $m = \frac{-100}{1}$ $(2, 600)$

   a) Graph. Don't forget to label each axis!!!

   b) Equation: $y = \frac{-100}{1}x + 800$

   c) How much was the laptop originally worth?

   $800

$ (y-axis)
1600 1500 1400 1300 1200 1100 1000 900 800 700 600 500 400 300 200 100
1 2 3 4 5 6 7 8 9 10 11 12
years
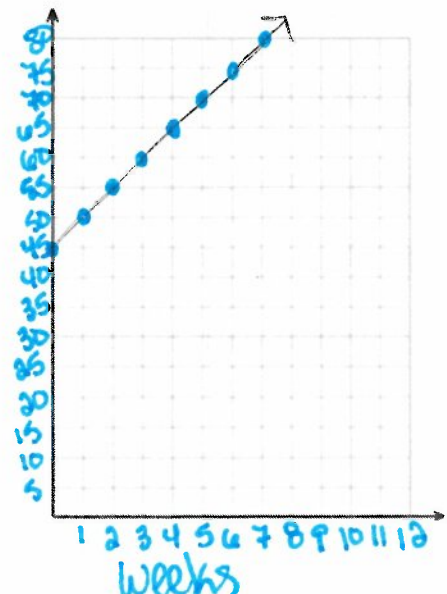
3. You decide to start adding $5 each week to your bank account, which already has some money in it. After 4 weeks you have a total of $65 in your savings account. $m = \frac{5}{1}$ $(4, 65)$

   a) Graph. Don't forget to label each axis!!!

   b) Equation: $y = \frac{5}{1}x + 45$

   c) How much did your account start with?

   $45

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5
1 2 3 4 5 6 7 8 9 10 11 12
weeks

4. **An online book club has a one-time shipping fee plus a cost per book.**
   When you order 4 books the total cost is $16.
   When you order 8 books the total cost is $24.

   $(4,16)$ $(8,24)$ $m = \frac{8}{4} = \frac{2}{1}$

   $b = 8$

   a) Graph. Don't forget to label each axis!!!
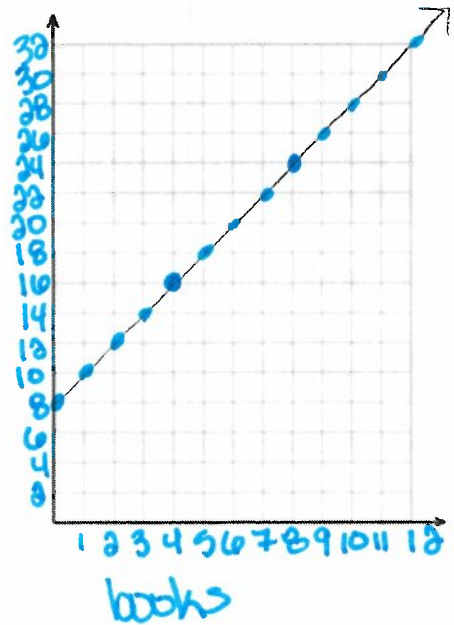
   b) Equation: $y = \frac{2}{1}x + 8$

   c) What is the cost per book?

   $2 per book
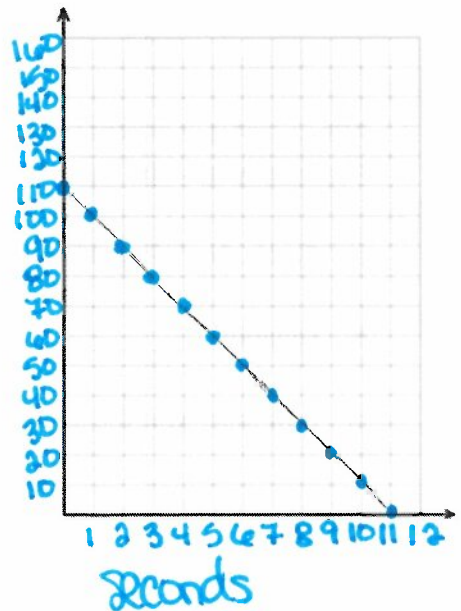
   d) What is the one shipping fee?

   $8

   8

   books

5. **An elevator in a tall building begins at a point 110 ft above the ground.**
   The elevator descends at a rate of 10 feet per second.

   $b = 110$
   $m = \frac{-10}{1}$

   a) Graph. Don't forget to label each axis!!!

   b) Equation: $y = \frac{-10}{1}x + 110$

   c) How long will it take the elevator to reach ground level?   ft

   11 seconds

   seconds

6. **There is an initial cost to rent a surfboard plus the cost per day.**
   The total cost for 3 days is $45 and the total cost for 8 days is $70.

   $m = \frac{25}{5} = \frac{5}{1}$

   a) Graph. Don't forget to label each axis!!!

   b) Equation: $y = \frac{5}{1}x + 30$

   $b = 30$

   8

   c) What is the initial cost of renting the surfboard?

   $30

   d) What is the rate per day for renting the surfboard?

   $5 per day

   days