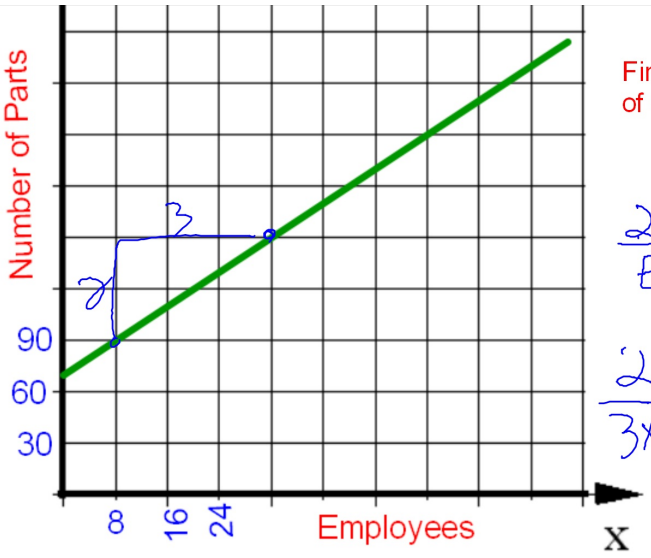
Find the rate of change:

# of Hours	Total Cost
5	226.50
8	303
11	379.50
19	583.5
24	711

$\frac{711-303}{24-8} = \frac{408}{16}$

$25.5/hr$



Find the rate of change:

$\frac{2.5 \text{ parts}}{\text{Employee}}$

$\frac{2 \times 30}{3 \times 8} = \frac{60}{24}$

Write the equation of the line that passes through this pair of points in both Point-Slope and Slope-Intercept Forms.

(6, -6) and (18, 4)

$\frac{4-(-6)}{18-6} = \frac{10}{12} = \frac{5}{6}$

$y-4=\frac{5}{6}(x-18)$

$y-4=\frac{5}{6}(x-18)$

$y-4=\frac{5}{6}x-15+4$

$+4 \quad +4$

$y=\frac{5}{6}x-11$

$4=\frac{5}{6}(18)-11$

$15-11$

$4=4$

Write the equation of the line that passes through this pair of points

(-2, 7) and (-2, 3)

$x=-2$

Model each statement with an equation

1. I bought 4 apples and 6 pears and spent $6.10

$6.10 = 4x + 6y$ x - amount of apples, y amount of pears

2. The landscaper was paid $100 for materials then $8.50 per hour to finish the flower garden.

$100 + (8.5x) = y$ x = # hours, y = how much was spent

These are both linear equations

For your birthday your father gives you 110 baseball cards. Your friend has the same birthday as you and was given 20 cards for his birthday. You plan on buying 5 new cards each week. Your friend plans on buying 8 cards each week.

In how many weeks will the two of you have the same number of baseball cards?

$110 + 5x = 20 + 8x$

$-5x \quad -5x$

$110 = 20 + 3x$

$-20 \quad -20$

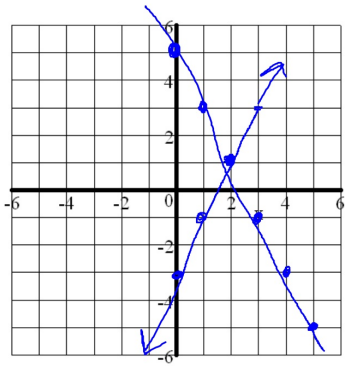
$\frac{90}{3} = \frac{3x}{3}$

$30 = x$

2. Graph these two lines on the same graph

$y = -2x + 5$ and $y = 2x - 3$

What is their point of intersection? What does this point represent?



(2, 1)

This is the only point that is on BOTH lines at the same time.

These are the only values for x and y that make BOTH equations true.

Chapter 7:

System of linear equations:

Two linear equations with the same variables.