

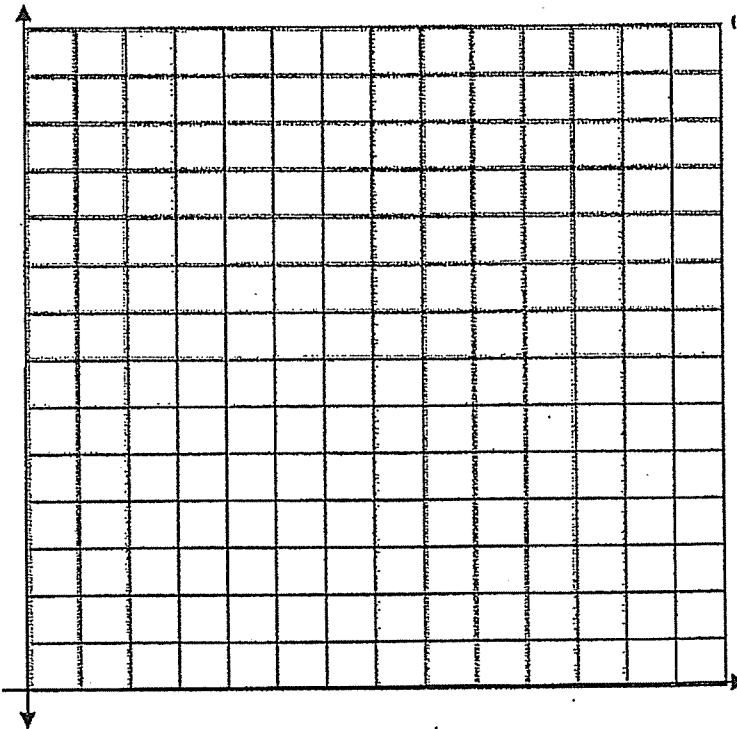
1) Bruno the Boilermaker needs a new sledge hammer. He goes to the mascot store and finds a great sledge hammer for \$200. Bruno doesn't have that kind of money so he works out a payment plan with the store. He agrees to pay \$20 a month until the hammer is paid off.

Fill out the table.

Months	Amount Bruno Owes
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

- Write an equation for this situation.
- What is the y-intercept? (,)
- Describe what the y-intercept represents in the problem.
- How long will it take Bruno to pay off the hammer?

Graph the equation.



- At what point does the line cross the x-axis?
Point = (,)
- Circle on the graph the point that shows Bruno has paid off his debt.
- What name could we give this point?

- 2) Freddie Gauss takes out a loan from his buddy, Descartes. He tells him that he will use the following equation to pay back the loan, where x represents days and y represents amount he owes.

$$3x + 2y = 12$$

Use what you know about x and y intercepts to answer the following questions. Hint: you DO NOT have to change the way the equation looks by solving for y .

- a) How much money did Descartes loan to Gauss?
- b) How long will it take Gauss to pay back the loan?
- c) Write the answers to "a" and "b" as points so you can graph them.

y-intercept = (,) x-intercept = (,)

- d) Use the two points to find out how much Gauss is paying back each day.

Rate at which Gauss is paying back the loan. _____

- e) Use the x and y intercepts to graph this situation.

