

You decide to make a t-shirt for this year's homecoming theme. The T-shirts cost \$6 each and there is a \$50 screen charge.

Define your variables and write an equation for the total cost as an equation of t-shirts purchased:

$x = \# \text{ of t-shirts}$

$y = \text{cost of t-shirts purchased}$

$$y = 6x + 50$$

1. If you buy 120 t-shirts, what is your total cost?

$$y = 6(120) + 50 = 770 \text{ dollars}$$

2. If you have \$1625, how many t-shirts can you buy?

$$1625 = 6x + 50$$

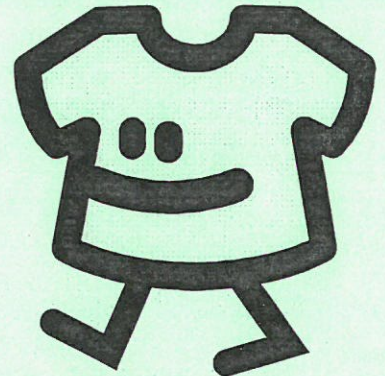
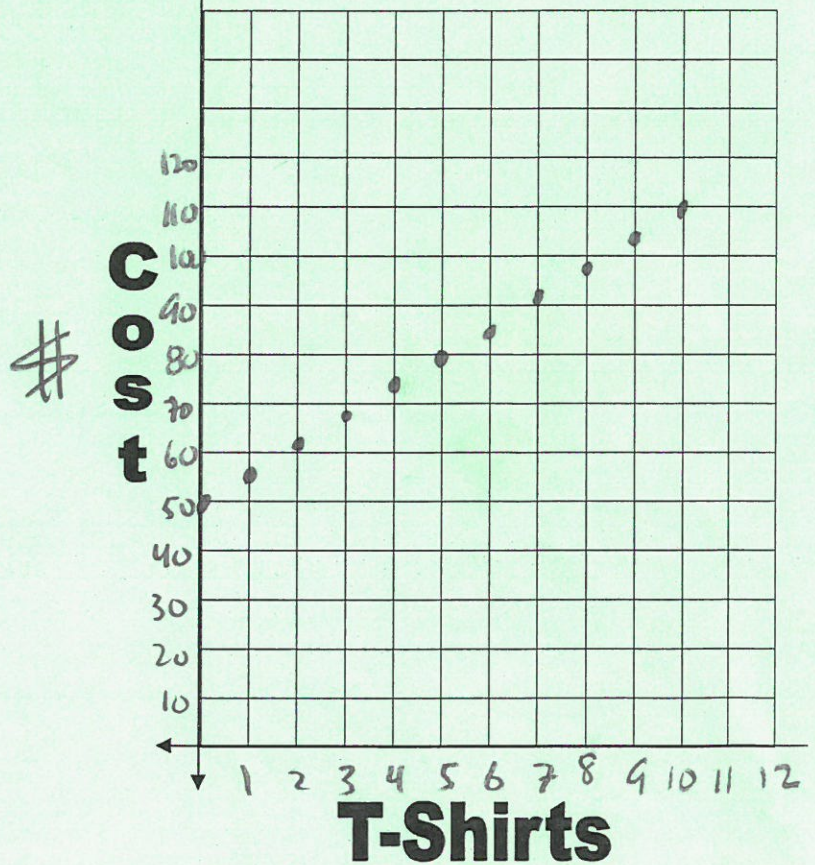
$$1575 = 6x$$

$$x = 262.5$$

you can buy
262 shirts

3. Make a table and graph.

x	y
0	50
1	56
2	62
3	68
4	74
5	80
6	86
7	92
8	98
9	104
10	110
⋮	
x	$6x + 50$



Cassie deposited \$540 into her bank account in December. Every month, she withdraws \$25.00 to pay for her part of the family cell phone bill.

Define your variables and write an equation that models the relationship between the number of months and money in her bank account.

$$x = \text{months}$$

$$y = \text{bank balance}$$

$$y = 540 - 25x$$

1. After the payment in April, how much money will she have in her account?

$$y = 540 - 25(4) = \boxed{440 \text{ dollars}}$$

2. In what month will she no longer have enough money to pay her bill?

$$0 = 540 - 25(x)$$

$$-540 = -25x$$

$$x = 21.6$$

$\boxed{\text{after 21 months}}$



3. Make a table and graph that fits the situation.

x	y
0	540
1	515
2	490
3	465
4	440
5	415
6	390
7	365
8	340
9	315
10	290
11	265
12	240

