

Back of sheet
from yesterday

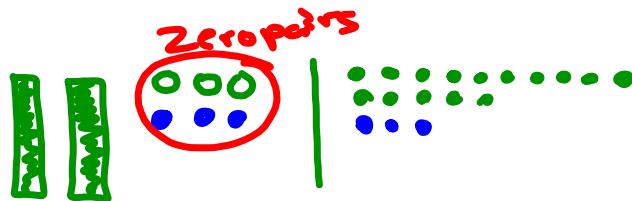
1) Given $2x - 3 = 15$

a) Solve the equation using tiles. Sketch tiles

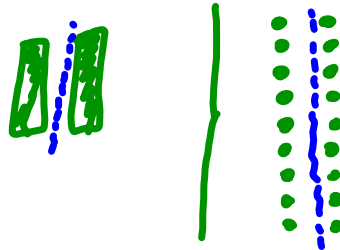
b) Verify



$$2x - 3 = 15$$



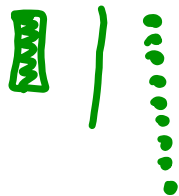
$$2x - 3 + 3 = 15 + 3$$



$$2x = 18$$

$$\div 2 \quad \div 2$$

$$x = 9$$



Verify

LHS

RHS

$$2x - 3 = 15$$

$$2(9) - 3$$

$$\underline{18} - 3$$

$$15$$

} same ✓

Found
 $x = 9$

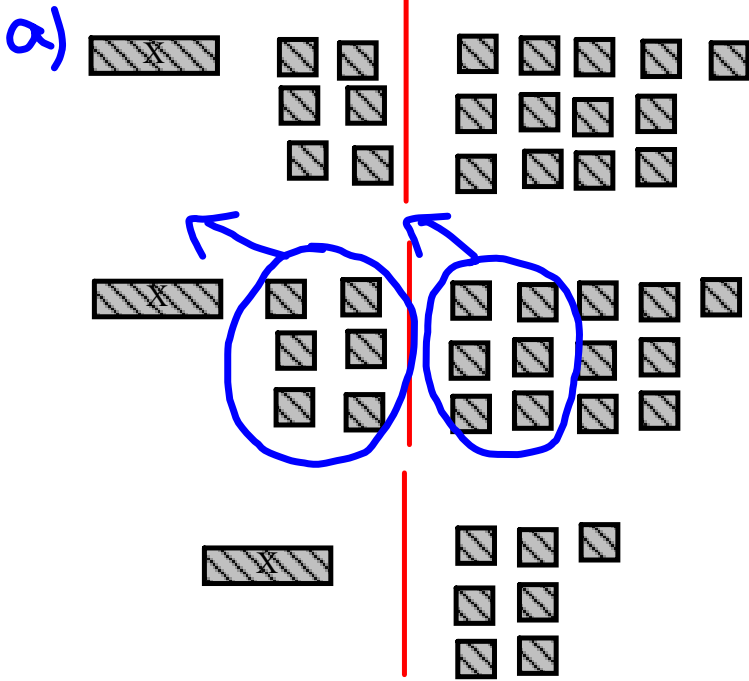
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Homework # 1-3
Solutions

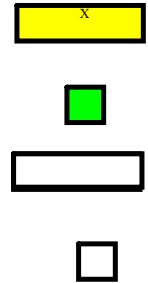
Use tiles to solve each equation.

1. Draw pictures to represent the steps you took to solve each equation.

- a) $x + 6 = 13$
- b) $4 + x = 12$
- c) $11 = x + 7$
- d) $2x = 16$
- e) $18 = 3x$
- f) $4x = 12$



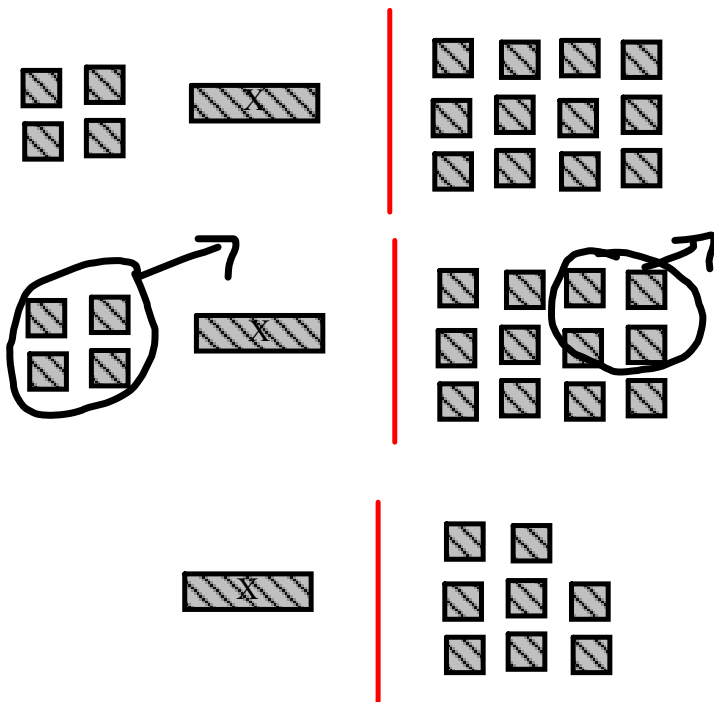
$$x + 6 = 13$$



$$x + 6 - 6 = 13 - 6$$

$$x = 7$$

b) $4 + x = 12$



$$4 + x = 12$$

$$4 + x - 4 = 12 - 4$$

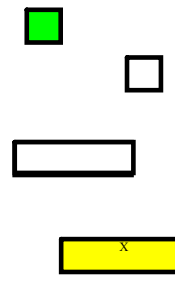
$$x = 8$$

Use tiles to solve each equation.

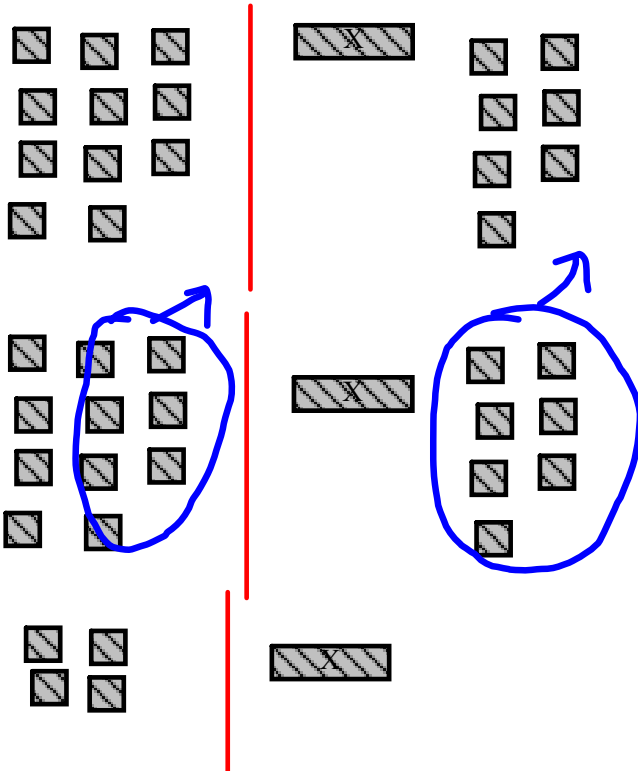
1. Draw pictures to represent the steps you took to solve each equation.

- a) $x + 6 = 13$ b) $4 + x = 12$ c) $11 = x + 7$
 d) $2x = 16$ e) $18 = 3x$ f) $4x = 12$

Homework # 1-8
 Solutions



c) $11 = x + 7$

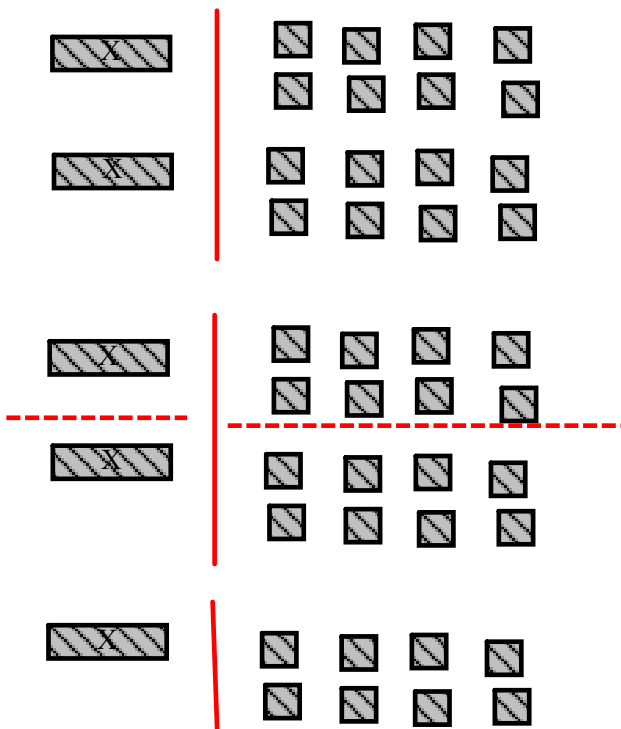


$11 = x + 7$

$11 - 7 = x + 7 - 7$

$x = 4$

d) $2x = 16$



$2x = 16$

$\frac{2x}{2} = \frac{16}{2}$

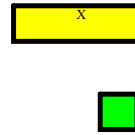
$x = 8$

Homework # 1-3
Solutions 3

Use tiles to solve each equation.

1. Draw pictures to represent the steps you took to solve each equation.

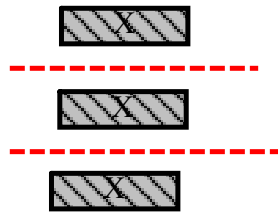
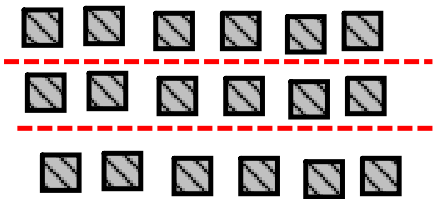
- a) $x + 6 = 13$ b) $4 + x = 12$ c) $11 = x + 7$
 d) $2x = 16$ e) $18 = 3x$ f) $4x = 12$



e) $18 = 3x$



$18 = 3x$

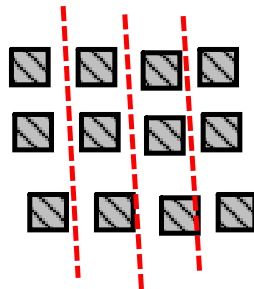
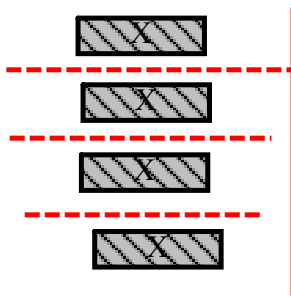


$\frac{18}{3} = \frac{3x}{3}$



$6 = x$

f) $4x = 12$



$4x = 12$

$\frac{4x}{4} = \frac{12}{4}$



$x = 3$

2. Seven more than a number is 12.
 a) Write an equation for this sentence.
 b) Solve the equation. Verify the solution.

Homework
 # 1-3
 Solutions

$x + 7 = 12$

$x + 7 - 7 = 12 - 7$

$x = 5$

Homework # 1-8
Solutions

4. At the used bookstore, one paperback book costs \$3.
How many books can be bought for \$12?
a) Write an equation you can solve to find how many books can be bought.
b) Solve the equation. Verify the solution.

$k = \text{number of books}$
 $3k = 12$

-1

$3x = 12$

$\frac{3x}{3} = \frac{12}{3}$

$x = 4$

$k = 4$ She can buy 4 books

7. $x = \text{the number}$
 $3x + 4 = 16$

$$3x + 4 - 4 = 16 - 4$$

$$3x = 12$$

$\div 3$ $\div 3$

$$\boxed{x = 4}$$

5. I) Write an algebraic expression for each statement.
II) Evaluate each expression by replacing the variable with 8.
a) five less than a number
b) a number increased by ten
c) triple a number
d) six more than three times a number

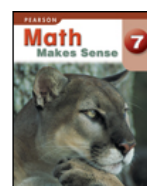
$$\begin{aligned} \text{a) } q - 5, \quad q = 8 \\ 8 - 5 = 3 \end{aligned}$$

$$\begin{aligned} \text{b) } a + 10, \quad a = 8 \\ 8 + 10 = 18 \end{aligned}$$

$$\begin{aligned} \text{c) } 3n, \quad n = 8 \\ 3 \times 8 = 24 \end{aligned}$$

$$\begin{aligned} \text{d) } 3k + 6, \quad k = 8 \\ 3 \times 8 + 6 \\ 24 + 6 = 30 \end{aligned}$$

Class/Homework



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6 to #16

Test Tuesday

not #10 😊
not #12 😊
201

(iv)

In	out
0	3
1	4
2	5
3	

$n+3$

Check
 $n=0$ out = 3
 $1(0) = 3$
 0 → add 3

b)

In	out
0	7
1	4
2	1
3	

down 3

down 3 +7
 $-3n$

$7-3n$

6. There are n women on a hockey team.

Write a relation for each statement.

- a) the total number of hockey sticks, if each player has 4 sticks
- b) the total number of lockers in the dressing room, if there are 3 more lockers than players
- c) the total number of water jugs on the bench, if each group of 4 players shares 1 jug

a) $4n$
 b) $n + 3$
 c) $\frac{n}{4}$

7. Copy and complete each table. Explain how the Output number is related to the Input number.

a)

Input n	Output $n + 13$
1	14
2	15
3	16
4	17
5	18

b)

Input n	Output $5n + 1$
1	6
2	11
3	16
4	21
5	26

c)

Input n	Output $6n - 3$
1	3
2	9
3	15
4	21
5	27

8. Use algebra. Write a relation for each Input/Output table.

a)

Input n	Output
1	12
2	13
3	14
4	15

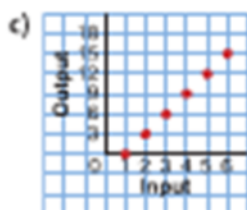
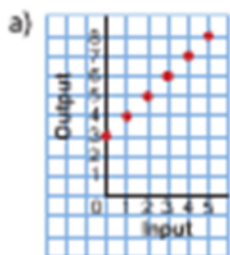
$$n + 11$$

b)

Input n	Output
1	2
2	7
3	12
4	17

$$5n - 3$$

9. Match each graph with one of the relations below.



- i) $7 - 3n$ is related to n .
- ii) $4n + 3$ is related to n .
- iii) $n - 1$ is related to n .
- iv) $n + 3$ is related to n .
- v) $3n - 3$ is related to n .
- vi) $7 - n$ is related to n .

a)

Input	1	2	3	4
Output	4	5	6	7

 $n + 3$ (iv)

b)

Input	0	1	2
Output	7	4	1

 $7 - 3n$ (i)

c)

Input	1	2	3	4
Output	0	3	6	9

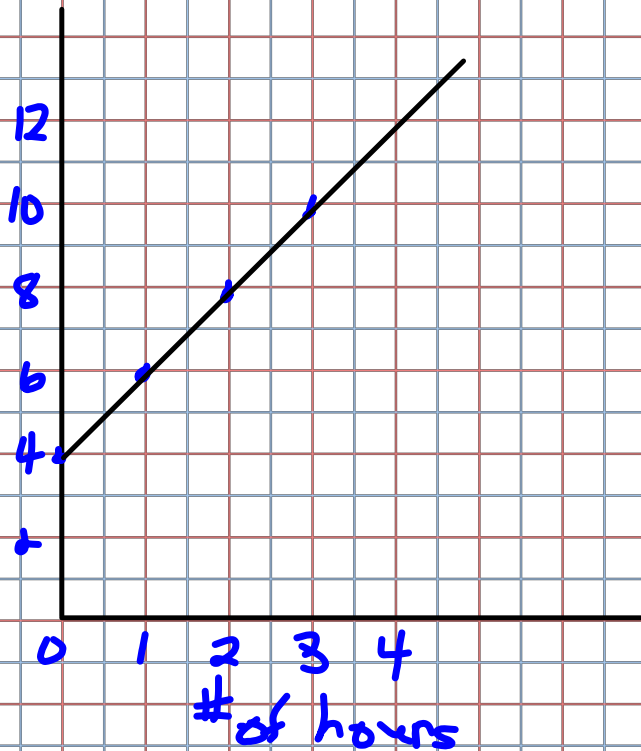
 $3n - 3$ (v)

10. For each relation below:
- Describe a real-life situation that could be represented by the relation.
 - Make a table of values.
 - Graph the relation.
 - Describe the graph.
 - Write 2 questions you could answer using the graph. Answer the questions.
 - $4 + 2m$ is related to m .
 - $15 - 2d$ is related to d .

a) $4 + 2m$

It costs \$4 to rent a canoe, plus \$2 for every hour

# of hours	Cost
0	4
1	6
2	8
3	10

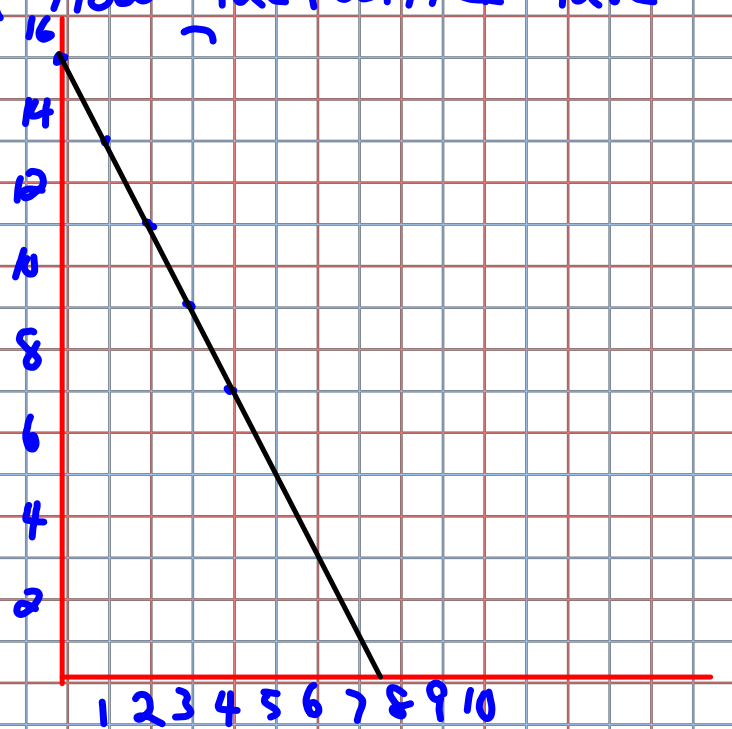


10b) 15-2d

I had \$15. I owe 2 friends the same amount of money, how much will I have when I pay them back?

Money owed	Money Left
0	15
1	13
2	11
3	9
4	7

Money I have left



Money owed to Each friend

pg 45

11. $c =$ number of children

$$2c + 6$$

c	Amt. Paid
0	6
5	16
10	26
15	36

Amt. Paid

40
35
30
25
20
15
10
5

0 5 10 15 20 25
of children

The graph is linear or a straight line.

di 25 children

$$\begin{aligned} \text{ii) } & 2 \times 25 + 6 \\ & 50 + 6 \\ & 56 \end{aligned}$$

iii) If he was paid \$46, there were 20 children

12.

Input	Output
0	24
4	32
8	40
12	48

Input	0	4	8	12
Output	24	32	40	48

goes up by 4 goes up by 8

mult. input by 2,
then add 24.

$$2n + 24$$

I have 24 cookies on a plate and I have 2 more trays to cook. How many cookies will I have in total.

I get paid \$24 a week plus \$2 for every extra errand I do.

There are 24 students in the gym and 2 more classes (with the same number) enter. How many students are in the gym.

Test Tomorrow

Page 45 # 13 to #16

Study

13 a) $3r = 15$

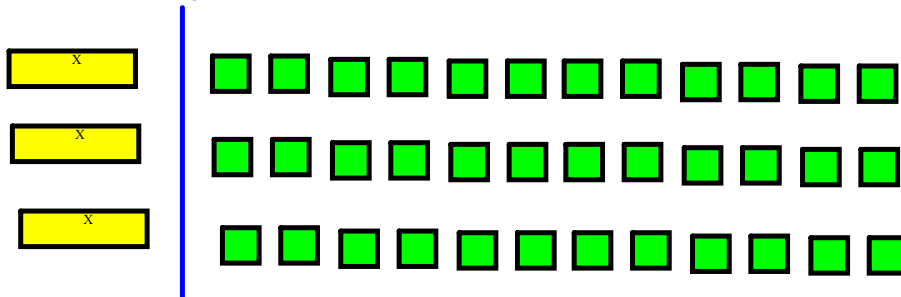
b) $r =$ number of red counter.

$3r - 4 = 20$

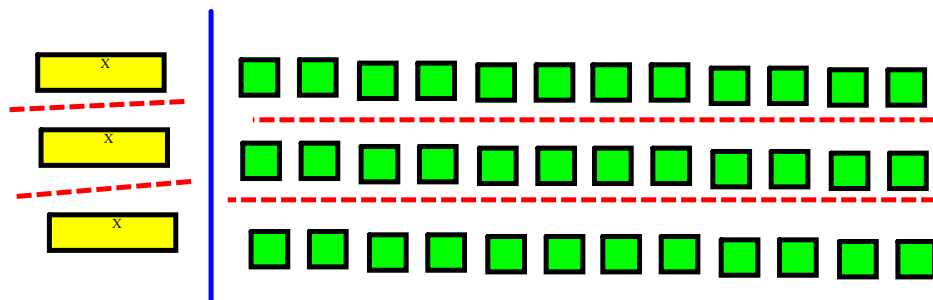
14. $s =$ side length

$8s = 48$

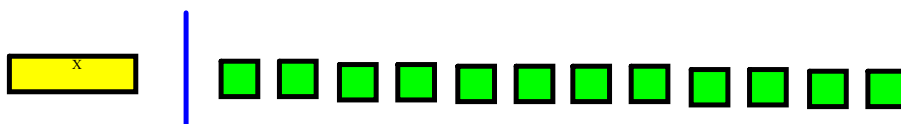
15. a) $x =$ number of groups
 $3x = 36$



$3x = 36$



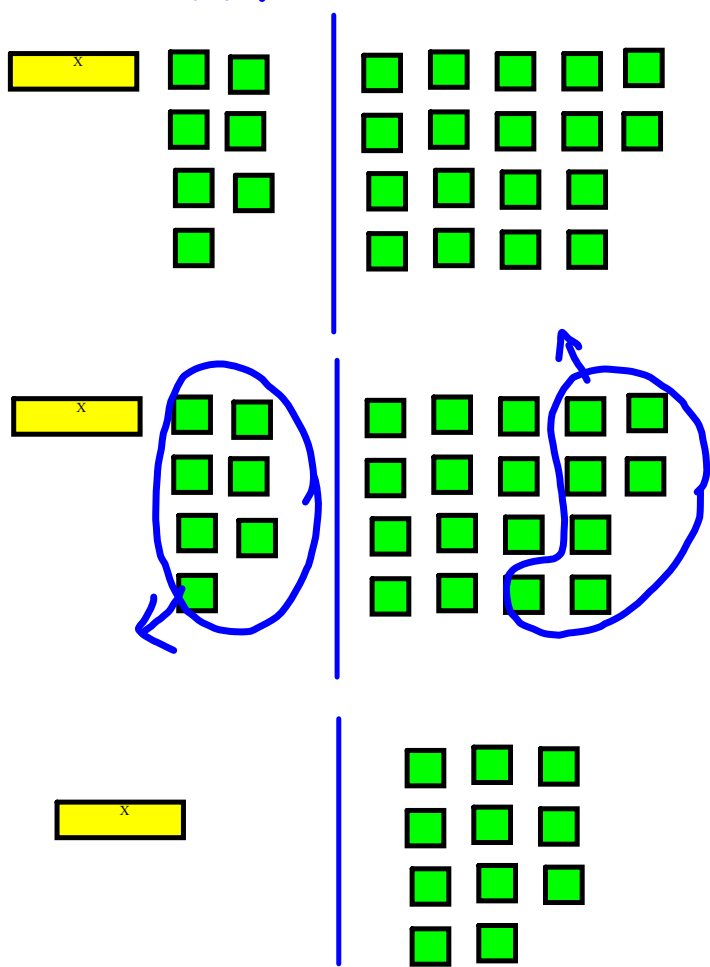
$\frac{3x}{3} = \frac{36}{3}$



$x = 12$

15 b) $x =$ number of tulips.

$$x + 7 = 18$$

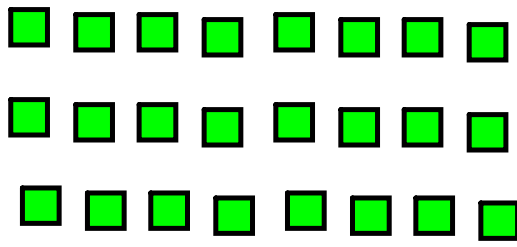


$$x + 7 = 18$$

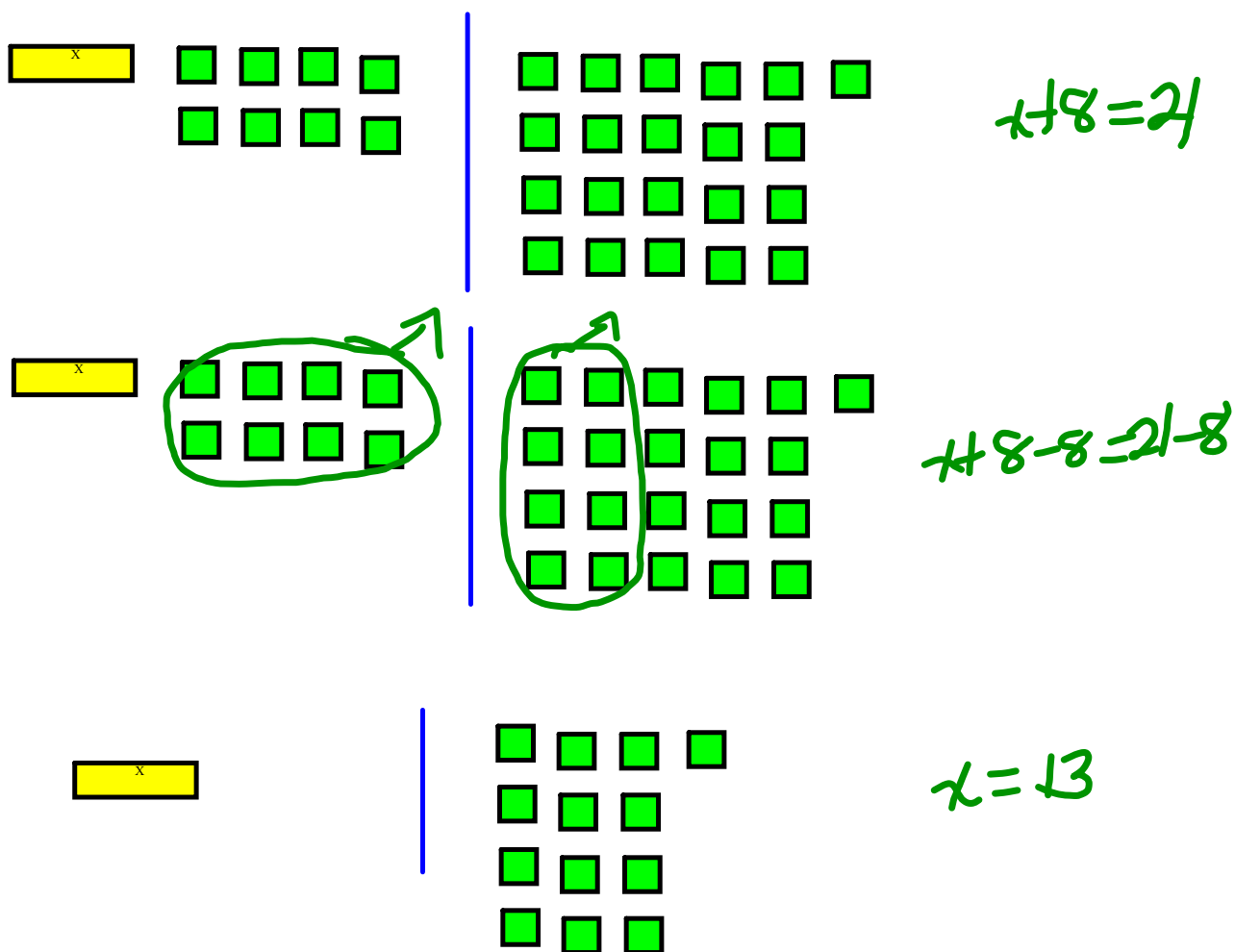
$$x + 7 - 7 = 18 - 7$$

$$x = 11$$

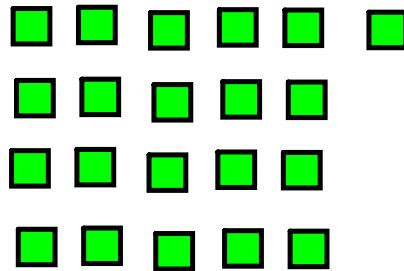
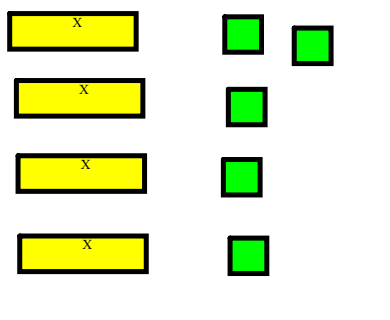
c) $x = \text{number of sleeves}$
 $3x = 24$

			$3x = 24$
			$\frac{3x}{3} = \frac{24}{3}$
			$x = 8$

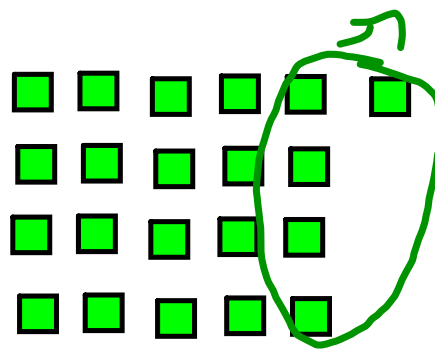
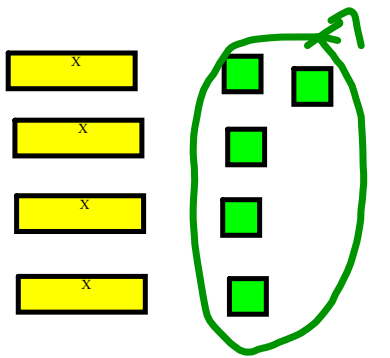
d) $x = \#$ of stamps she started with
 $x + 8 = 21$



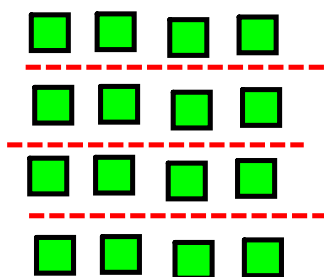
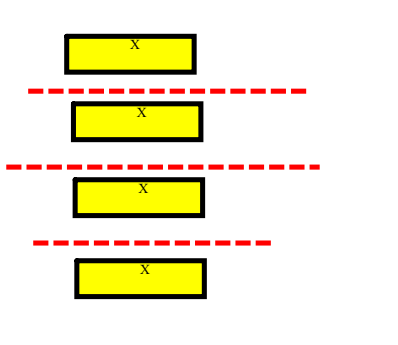
6. $x =$ the number
 $4x + 5 = 21$



$$4x + 5 = 21$$



$$4x + 5 - 5 = 21 - 5$$



$$4x = 16$$

$$\frac{4x}{4} = \frac{16}{4}$$

$$x = 4$$

The number is 4