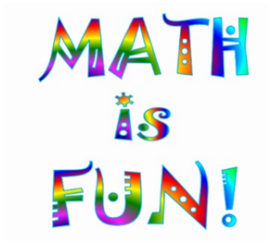
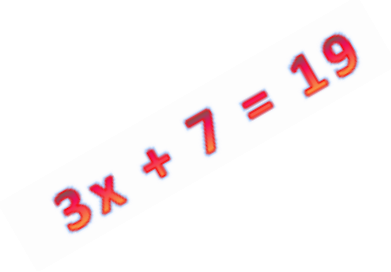
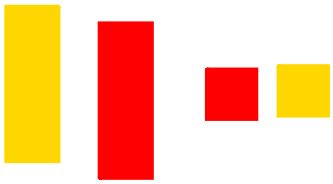


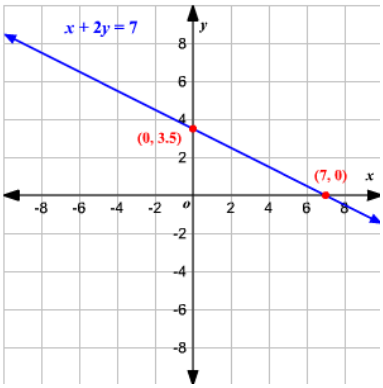
April 10



Unit 6

Linear Equations and Graphing

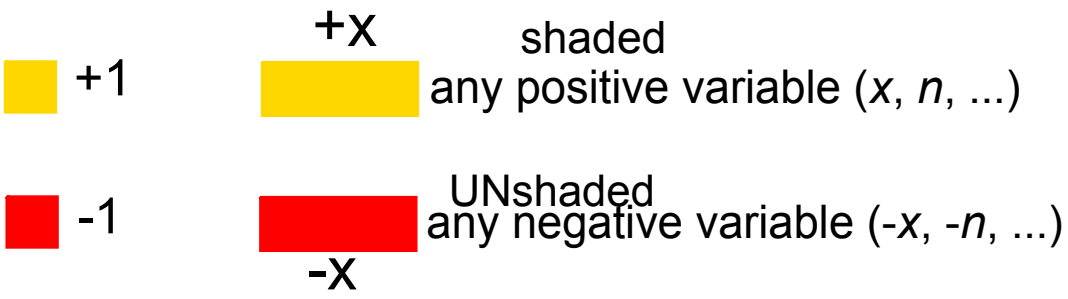




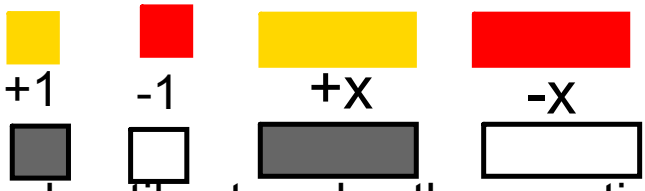
Section 6.1

Solving Equations using Algebra Tiles

Remember:

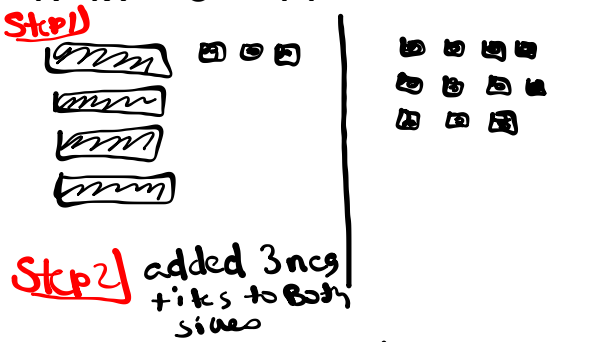


Also remember that a positive and a negative together gives 0.



Use algebra tiles to solve the equations. Verify the solutions.

1. $4x + 3 = 11$



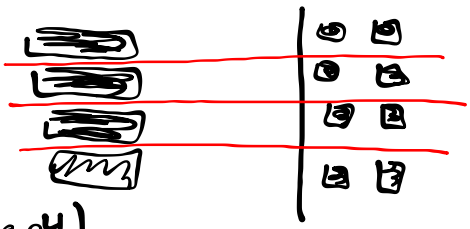
$4x + 3 = 11$

Step 2 added 3 neg tiles to both sides

$4x + 3 - 3 = 11 - 3$

$4x = 8$

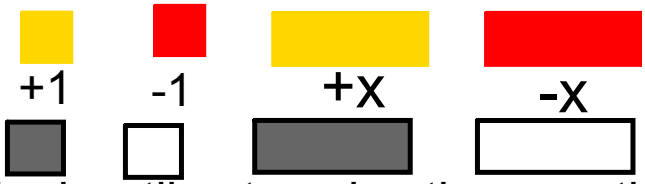
Step 3 model what's left



$\frac{4x}{4} = \frac{8}{4}$

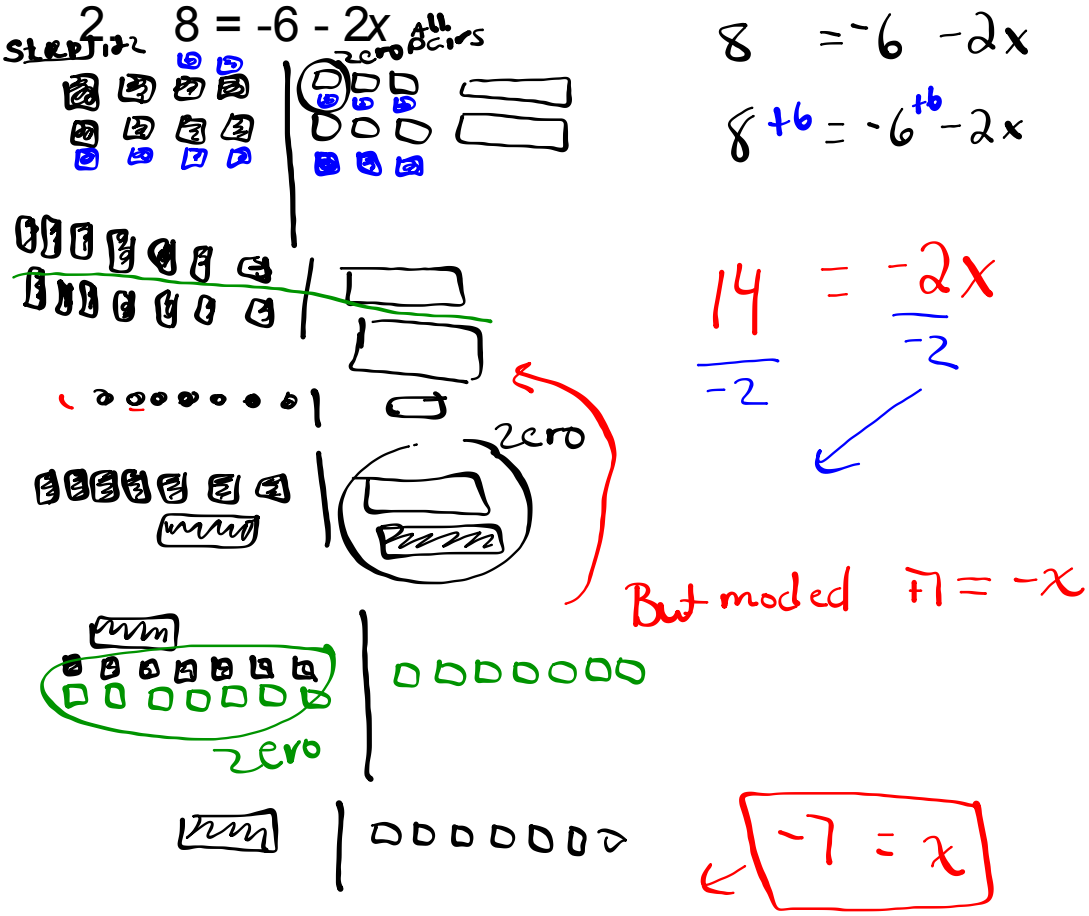
Step 4 model answer

$x = 2$



Use algebra tiles to solve the equations. Verify the solutions.

2. $8 = -6 - 2x$



$8 = -6 - 2x$

$8 + 6 = -6 + 6 - 2x$

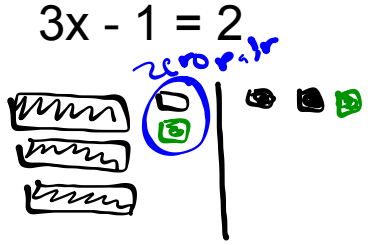
$\frac{14}{-2} = \frac{-2x}{-2}$

But modeled $7 = -x$

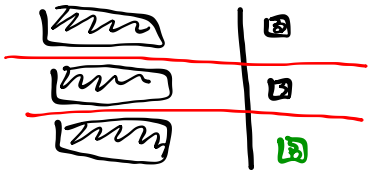
$-7 = x$

Use algebra tiles to solve the equations. Verify the solutions.

3. $3x - 1 = 2$



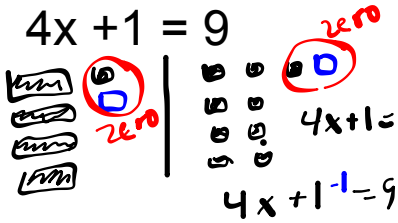
$3x - 1 + 1 = 2 + 1$

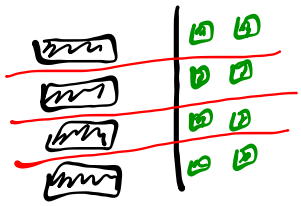


$\frac{3x}{3} = \frac{3}{3}$

$x = +1$

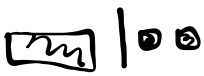
4. $4x + 1 = 9$





$4x = 8$

$\frac{4x}{4} = \frac{8}{4}$



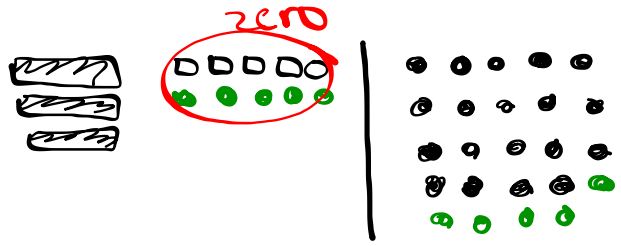
$x = 2$

Jodee is a contestant in the spell-a-thon at her school.
A contestant receives 3 points for every word spelled correctly.
Because of a technical penalty, Jodee loses 5 points.
She now has 19 points.
How many words has Jodee spelled correctly?

Use tiles

+ shaded
- unshaded

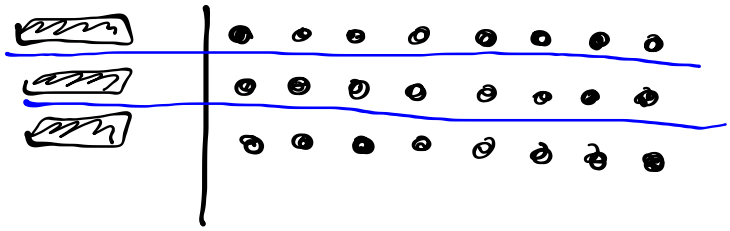
$3w - 5 = 19$



Key words
- per
- for every
- for each
- goes with

$3w - 5 = 19$

$3w - 5 + 5 = 19 + 5$



$3w = 24$

$w = 8$

Jodee has spelled 8 words correctly

Class/Homework

Page 324

#5, #6, #7

model #5 with pictures

use algebra for #6 & #7

Check

3. Describe the operation you would perform to isolate the variable in each equation.

a) $a - 3 = 6$ b) $4 + b = 11$ c) $5c = 30$ d) $\frac{d}{7} = 3$

e) $e + 8 = 17$ f) $-5 + f = 3$ g) $45 = 3g$ h) $8 = \frac{h}{6}$

4. Solve each equation in question 3. Verify the solution each time.

3a) addition

4.

$a - 3 = 6$

$a - 3 + 3 = 6 + 3$

$a = 9$

Check

LS

$a - 3$

$9 - 3$

6

RS

6

b) $4 + b = 11$

$b + 4 = 11$

$b + 4 - 4 = 11 - 4$

$b = 7$

LS

$4 + b$

$4 + 7$

11

RS

11

c) $5c = 30$

$\frac{5c}{5} = \frac{30}{5}$

$c = 6$

LS

$5c$

5×6

30

RS

30

d) $\frac{d}{7} = 3$

$\frac{d}{7} \times 7 = 3 \times 7$

$d = 21$

LS

$\frac{d}{7}$

$\frac{21}{7}$

3

RS

3

e) $e+8=17$

$e+8-8=17-8$

$e=9$

LS: $e+8$, $9+8$, 17 RS: 17

f) $-5+f=3$

$-5+f+5=3+5$

$f=8$

LS: $-5+f$, $-5+8$, 3 RS: 3

g) $45=3g$

$\frac{45}{3}=\frac{3g}{3}$

$15=g$

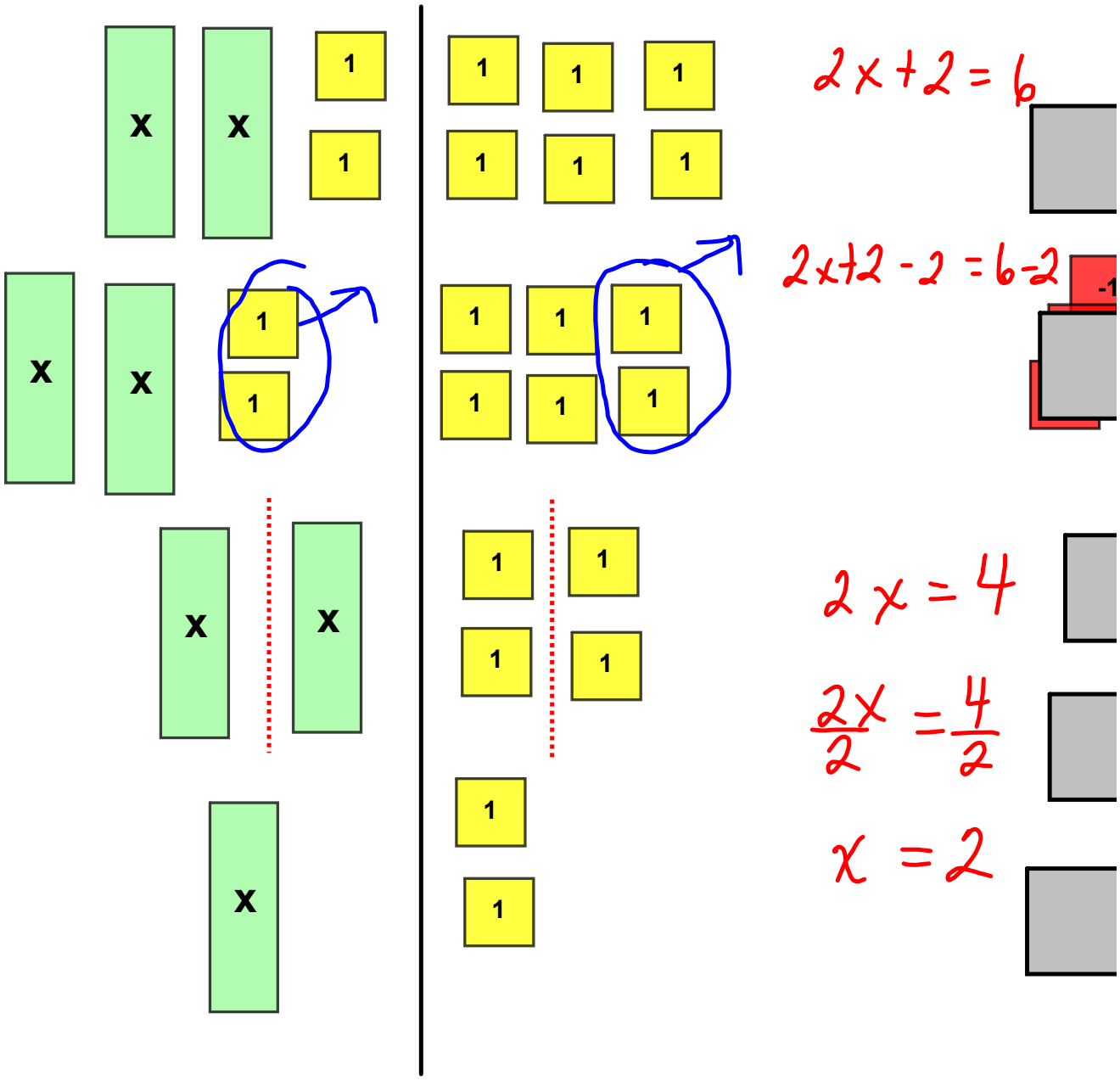
LS: 45 RS: $3g$, 3×15, 45

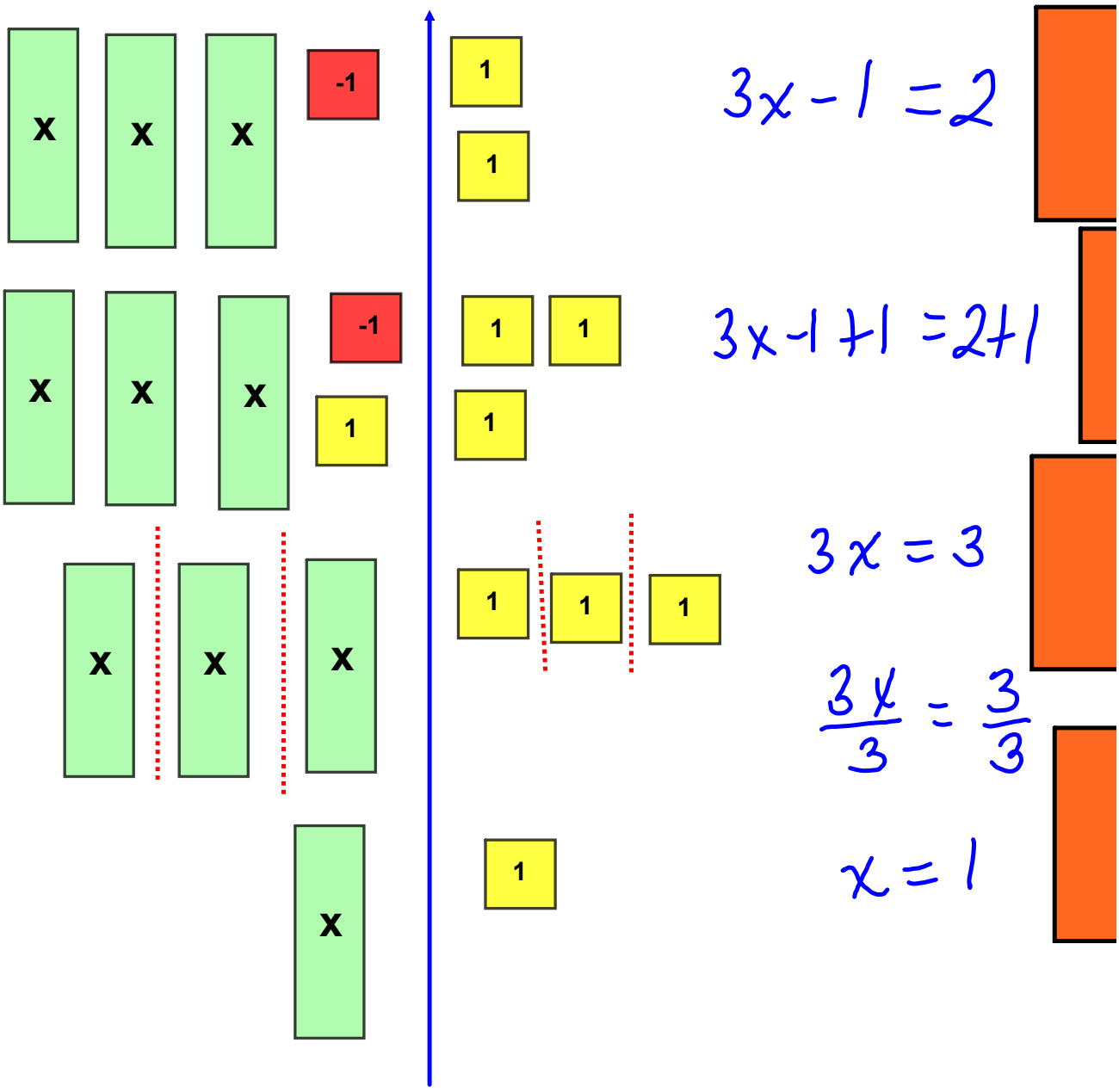
h) $8=\frac{h}{6}$

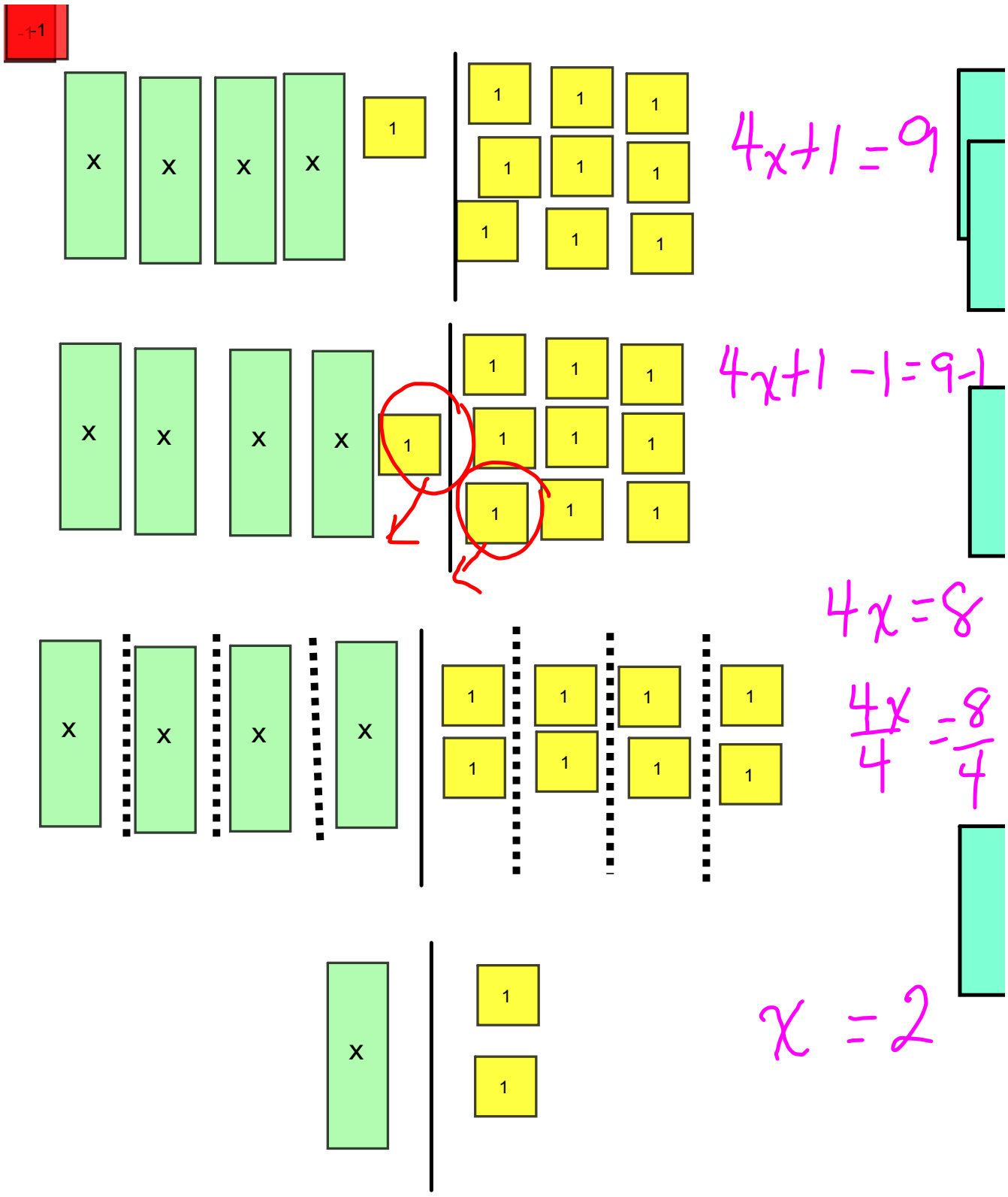
$8\times6=\frac{h}{6}\times6$

$48=h$

LS: 8 RS: $\frac{h}{6}$, $\frac{48}{6}$, 8


x
x
1
1
1
1
1
1
1
1
1
x
x
1
1
1
1
1
1
1
1
1
x
x
1
1
1
1
x
1
1
2x+2=6
2x+2-2=6-2
-1
2x=4
2x/2=4/2
x=2


x
x
x
-1
1
1
3x - 1 = 2
x
x
x
-1
1
1
1
1
3x - 1 + 1 = 2 + 1
x
x
x
1
1
1
3x = 3
x
x
x
3x/3 = 3/3
x
1
x = 1


-1
x
x
x
x
1
1
1
1
1
1
1
1
1
1
1
4x+1=9
4x+1-1=9-1
4x=8
4x/4 = 8/4
x = 2

Discuss pages 319 - 323

Homework Read pages 319 -323
pg. 324 # 1-7