Warm Up Gr 8

Sept. 4

a) Model -4 with tiles

○○○○

b) Model +3 with tiles in two ways

1st

• • •

2nd

• • •

c) Model (+4) x (-5) with tiles

Put down 4 groups Of (-5) unshaded

○○○○○ ○○○○○ ○○○○○ ○○○○○

$(+4)\times(-5) = (-20)$

Page 68-69 #5, #6, #

5a) $(-1)+(-1)+(-1)$

$3 \times (-1) = -3$

b) $(-2)+(-2)+(-2)+(-2)+(-2)$

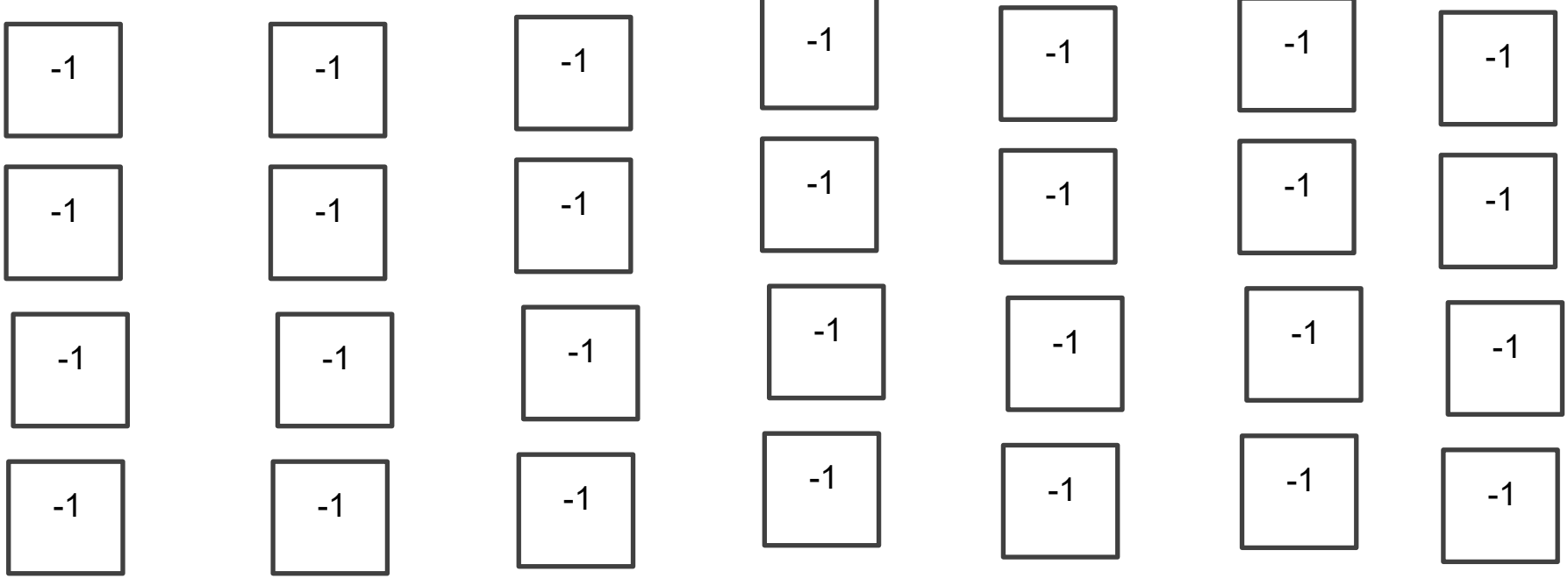
$5 \times (-2) = -10$

c) $(+11)+(+11)+(+11)+(+11)$

$4 \times (+11) = +44$

6. a) $(+7) \times (-4)$

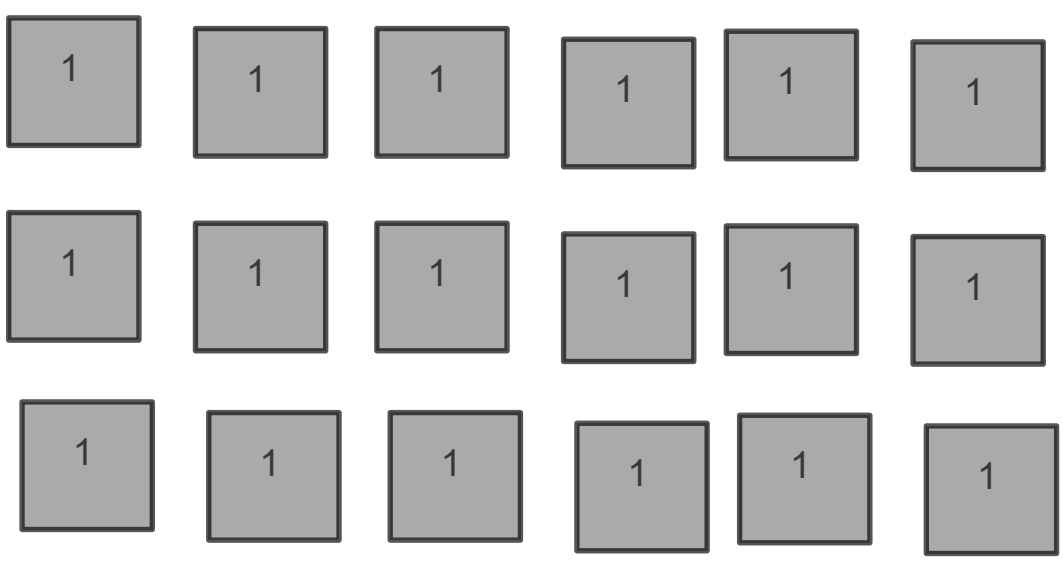
$(-4)+(-4)+(-4)+(-4)+(-4)+(-4)+(-4)$



$= -28$

b) $(+6) \times (+3)$

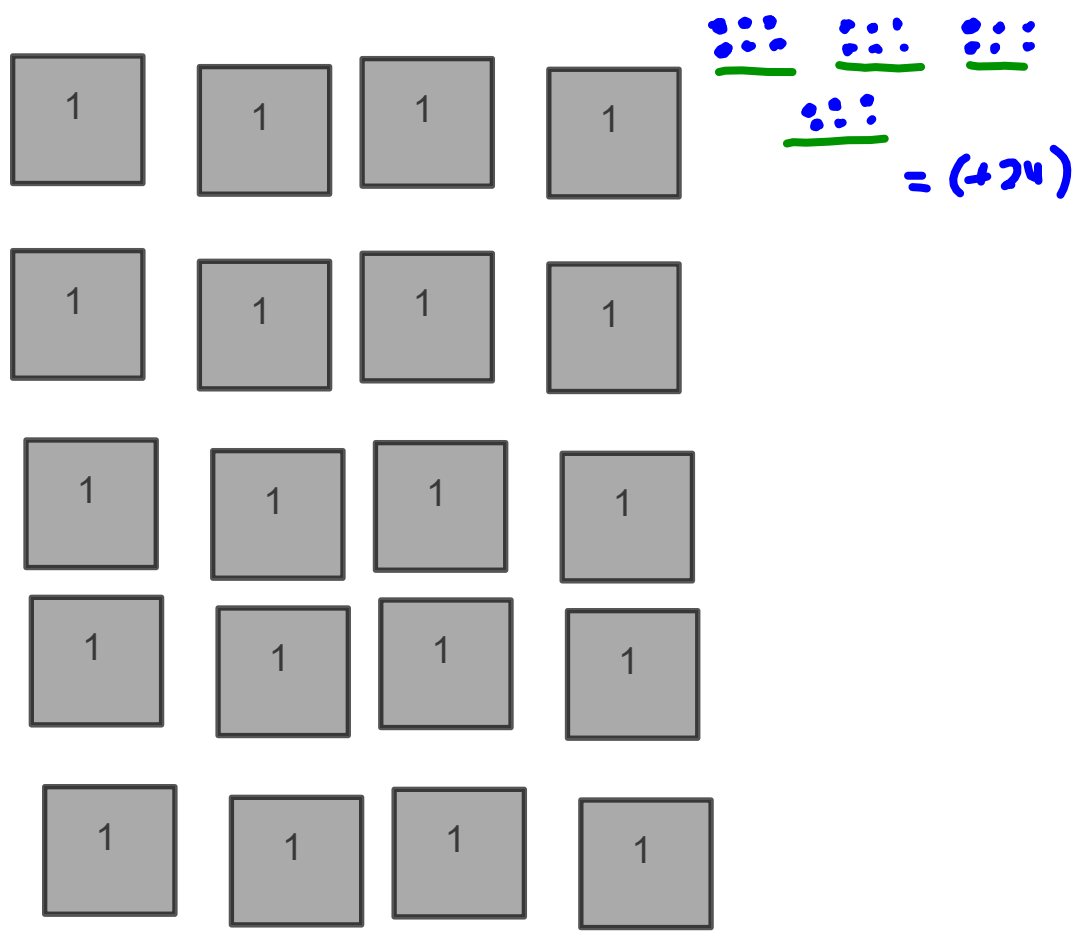
$(+6)+(+6)+(+6)$



$= +18$

c) $(+4) \times (+6)$

$= +24$



d) $(+5) \times (-6)$

-30

$$\underbrace{2 + 2 + 2 + 2 + 2 + 2}_{6 \times 2}$$

Repeated addition
↳ is multiplicat

From Yesterday

Multiplying Two Negative Integers Using TILES

We just said , (+2) x (-4) means 2 sets of -4, but we always start with zero,so what are we doing with the 2 sets of -4?

(+2) x (-4) = (-8)

If (+2) x (-4) means to put down 2 sets of -4, what does (-2) x (-4) mean? (Always start with zero)
It means to take away 2 groups of -4

(-2) x (-4)
Remove 2 groups Of (-4) unshaded

Redraw ⇒

So (-2) x (-4) = (+8)

What about (-3) x (-2)? It means take away 3 groups of -2.

Remove 3 groups Of (-2) unshaded

Need zero pairs

So (-3) x (-2) = (+6)

Now try (-5) x (-1)

Redraw ⇒

(-5) x (-1) = (+5)

So when you multiply two negative integers, multiply the numbers and your answer will always be positive.

Final Multiplying rule (-) x (-) = (+)

Yesterday
(+) x (-) ⇒ (-)
(-) x (+)

(+) x (+) = (+)
New
(-) x (-) = (+)

Number line Modeling

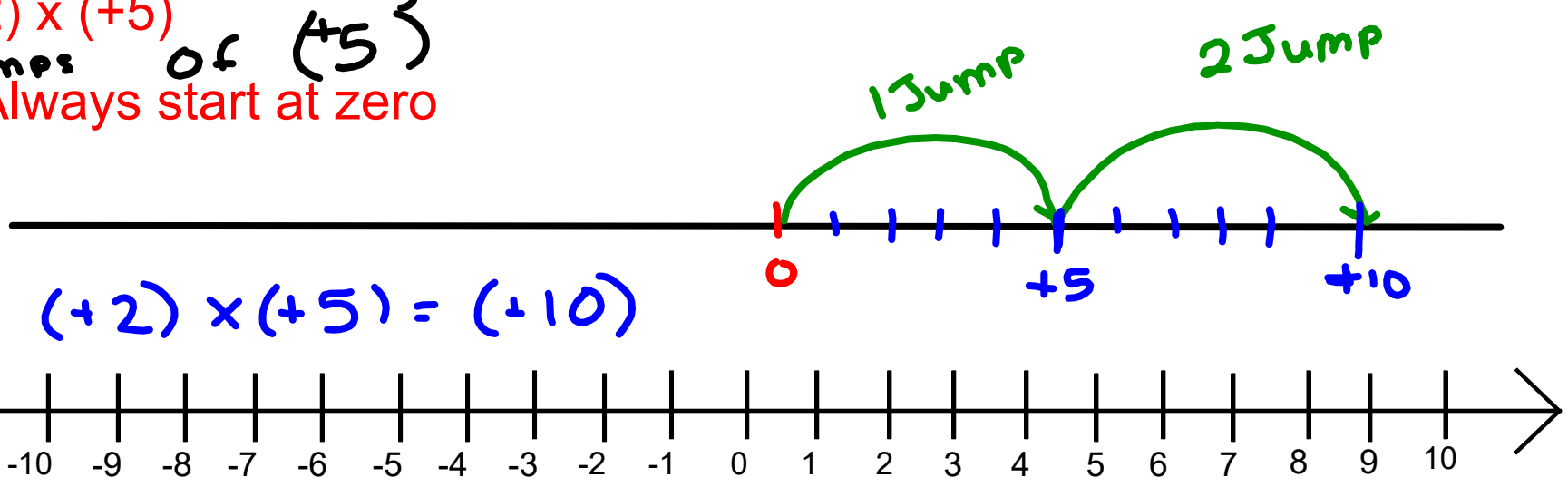
think jumps

- we will focus on (+) x (-) or (+) x (+)

(+2) x (+5)

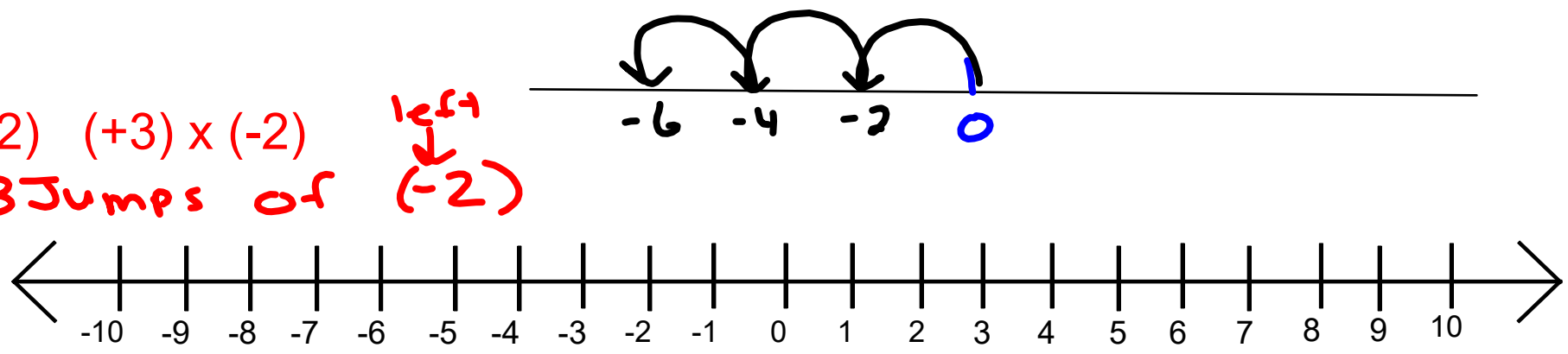
2 Jumps of (+5) Right 5

Always start at zero



Ex 2) (+3) x (-2)

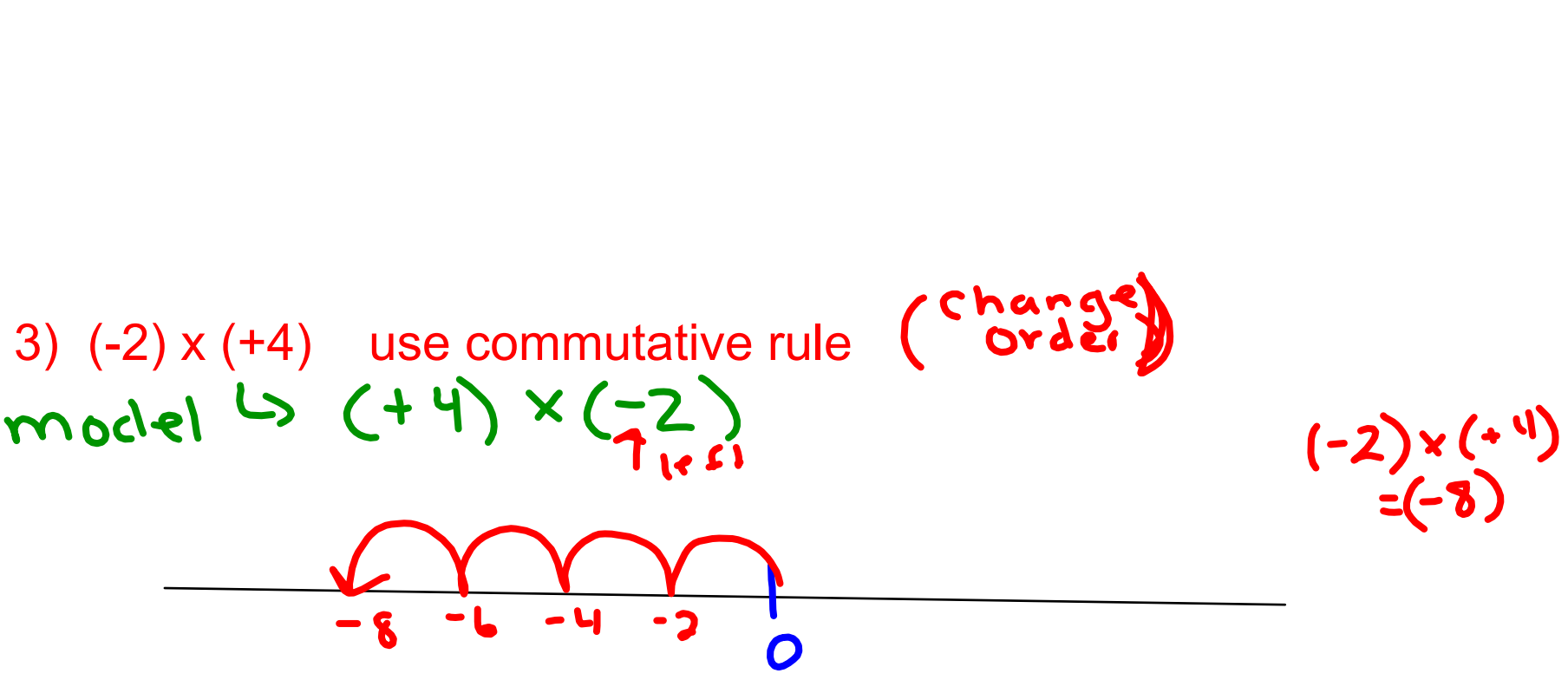
3 Jumps of (-2) left



Ex 3) (-2) x (+4) use commutative rule (change order)

model ↳ (+4) x (-2)

(-2) x (+4) = (-8)



Homework/ Class Work

pg. 68

Finish yesterdays if not done then

5, 6ab

#6cd, 7, 8(a,c) → can use tiles or # lines

↓

Jumps (arrows) × (Jump Size (arrow size))

( ) × ( ) = ( )