Grade 8 Warm Up
Unit 2 Integers (Day 2)
Sept. 6, 2018

1) Write the multiplication expression for each repeated addition

a) (-2) + (-2) + (-2) + (-2) + (-2) + (-2) + (-2)

7 × (-2) # groups × group size

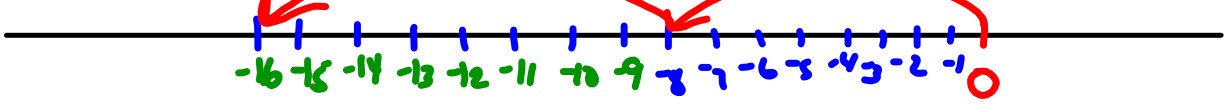
b) (+7) + (+7) + (+7)

3 × (+7)

2) Use a number line to find the product of (+2) x (-8) (MUST draw the number line)

different

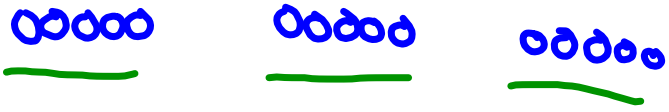
2 Jumps of size -8 = -16



3) Model (+3) x (-5) with tiles

Put down 3 groups of size -5

● ⇒ +
○ ⇒ −



= -15

$3 + 3 + 3 + 3 = 12$

$4 \times 3 = 12$

Page 68-69 #5, #6, #7, #8,

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

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

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

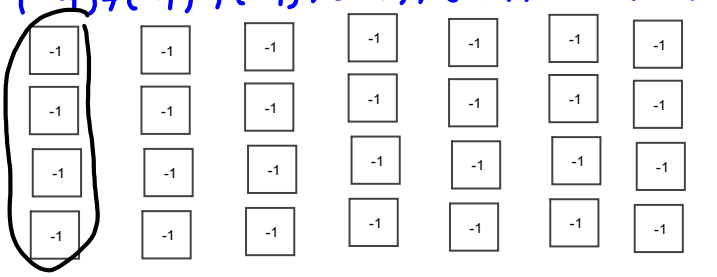
$5 \times (-2) = -10$

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

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

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

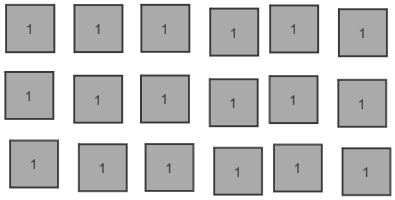
$(-4)+(-4)+(-4)+(-4)+(-4)+(-4)+(-4)$



$= -28$

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

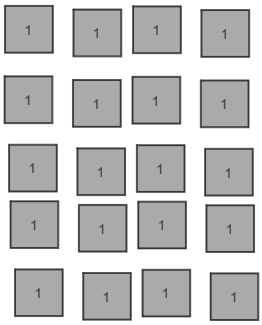
$(+6)+(+6)+(+6)$



$= +18$

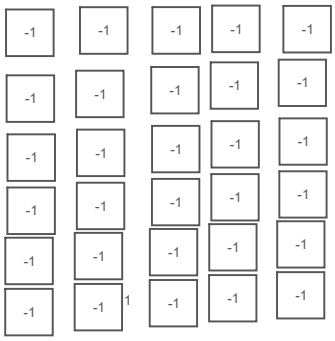
c) $(+4) \times (+6)$

$= +24$

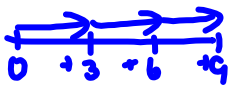


d) $(+5) \times (-6)$

-30



7a) $3 \times (+3) = +9$

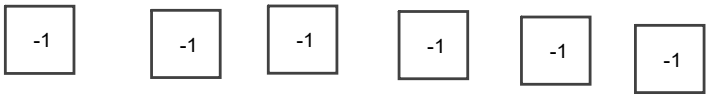


b) $4 \times (-2) = -8$

# of Jumps x Size

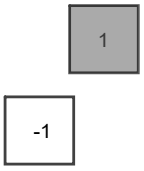
$4 \times (-2) = -8$

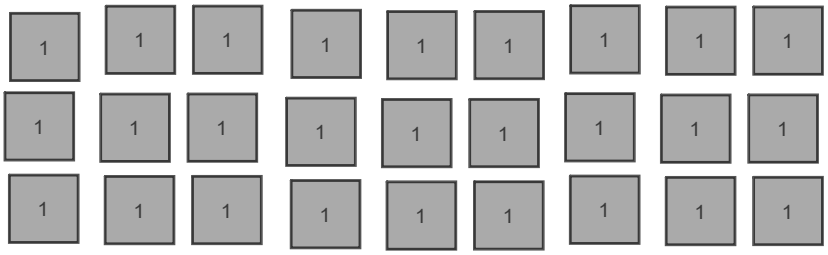
8a) $(+6) \times (-1)$



$= -6$

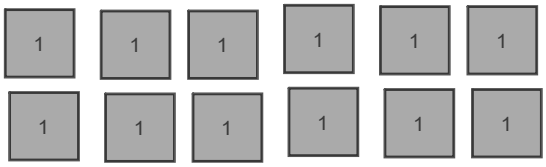
b) $(+3) \times (+9)$





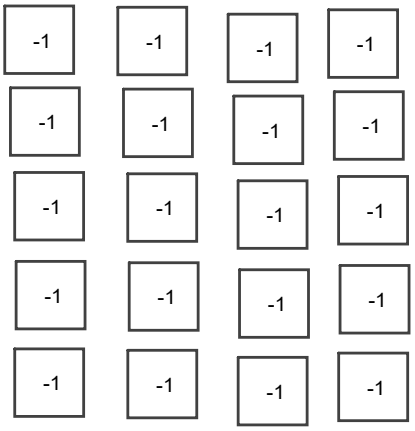
$= +27$

c) $(+2) \times (+6)$



$= +12$

d) $(+4) + (-5)$



$= -20$

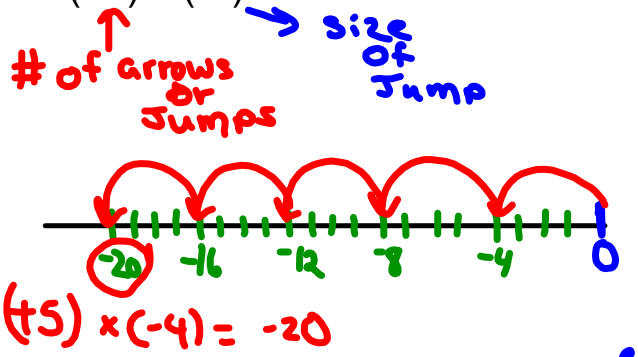
From Last Math Class

Multiplying Integers with Number lines and tiles

Fist integer's sign indicates weather you lay down tiles or take tiles away

1) Use Number Line

(+5) x (-4)



2) Use tiles

(+2) x (-6) = -12

put down 2 groups of -6

000000 000000

3) Use tiles

(-3) x (+4)

same as

(+4) x (-3) = -12

000 000 000 000

Take away 3 groups of +4

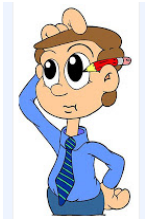
0000 0000 0000

= 0000 0000 0000

-12

From Last Math Class

(continued)



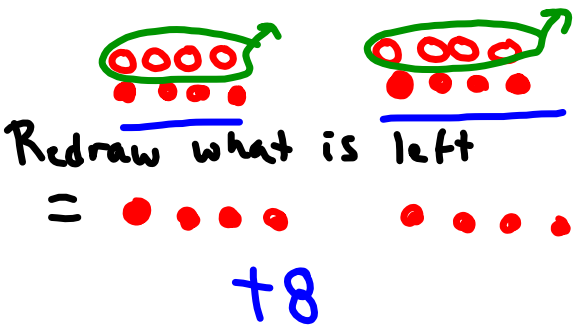
Multiplying Integers with tiles

need zero pairs

take away 2 groups

(-2) x (-4)

of size -4



Class/Homework

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8(d) model # line

#9(a,b,c,d), → Don't model Just write out and answer ( ) x ( ) =

#10(a,e), tiles

#11(a,c,e), tiles

#12,

#13,

#14,

#17(a,b),

#20(a)

( ) x ( ) = ( )

no models needed #12 to #20

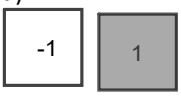
Deposit

Withdraw

Red ⇒ −

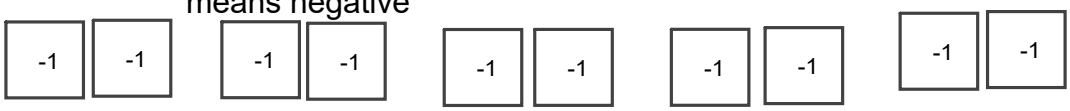
Yellow ⇒ +

Page 68-69 #5, #6, #7, #8, #9(a,b,c,d), #10(a,b,c,d), #11(a,c,e), #12, #13, #14, #17(a,b), #20(a)



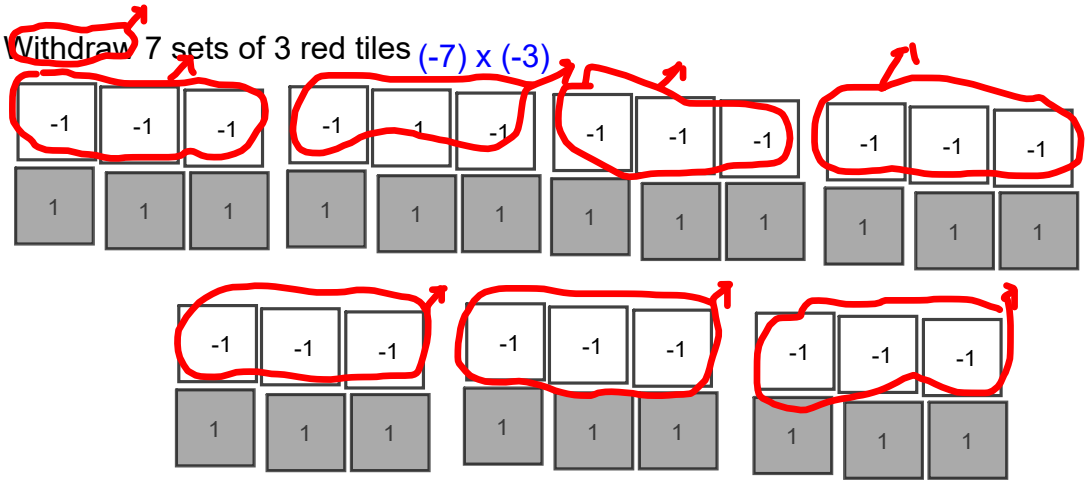
9a) 5 sets of 2 red tiles (+5) x (-2)

means negative



9b) Deposits 5 sets of 2 yellow tiles (+5) x (+2)

9c) Withdraw 7 sets of 3 red tiles (-7) x (-3)



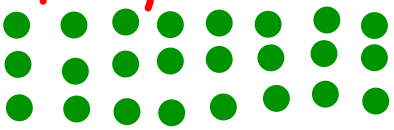
9d) Withdraw 9 sets of 4 yellow tiles

(-9) x (+4)

Page 68-69 #5, #6, #7, #8, #9(a,b,c,d), #10(a,b,c,d), #11(a,c,e), #12, #13, #14, #17(a,b), #20(a)

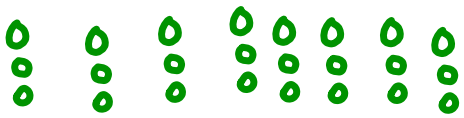
10 a) $(+1)\times(+5) = +5$

b) $(+8)\times(+3) = (+24)$

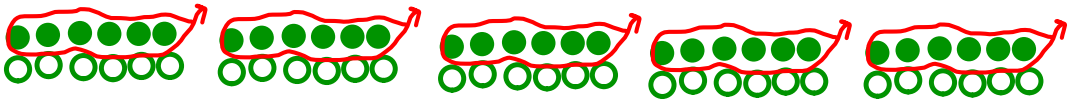


c) $(+1)\times(-2) = -4$

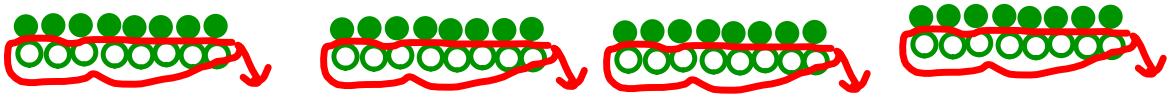
d) $(+8)\times(-3) = -24$



e) $(-5)\times(+6) = -30$



f) $(-4)\times(-8) = +32$



Page 68-69 #5, #6, #7, #8, #9(a,b,c,d), #10(a,b,c,d), #11(a,c,e), #12, #13, #14a, #17(a,b), #20(a)

12) (+2) x (+9) = (+18) It rose a total of 18°

13) (-3) x (+11) = (-33) It drained 33 cm in 11 hours

14) Ted spend $6 a day for 8 days. How much did he spend?

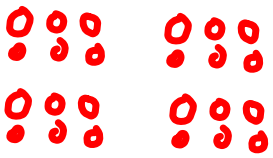
(+8) x (-6) = (-48)

17a) (-5) x (+8) = (-40) He will have $40 less

17b) (+5) x (+2) = (+10) He had $10 more

20a) (+3) x (-2) x (+4)

= x (+4)

= 

= (-24)

When you multiply two positive integers, you simply multiply the numbers and your answer will always be positive.

(+7) x (+5) = +35 **(+12) x (+10) = +120**

When you multiply a positive integer and a negative integer, you multiply the numbers, and your answer will always be negative.

(+6) x (-3) = -18 **(+9) x (-4) = -36**

(-8) x (+6) = -48 **(-4) x (+ 7) = -28**

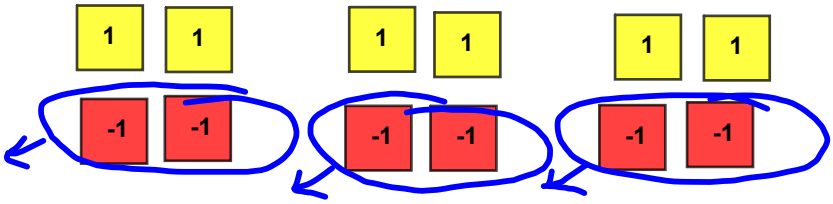
Multiplying Two Negative Integers Using Modeling

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?

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

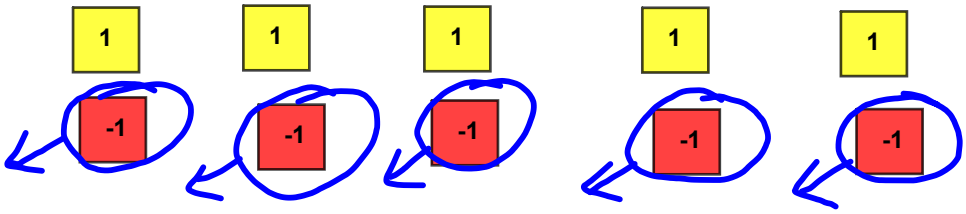
So (-2) x (-4) = +8

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



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

Now try (-5) x (-1)



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

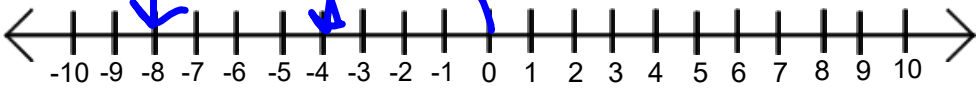
So when you multiply two negative integers, multiply the numbers and your answer will always be positive.

If done on day 2 , discuss using number lines

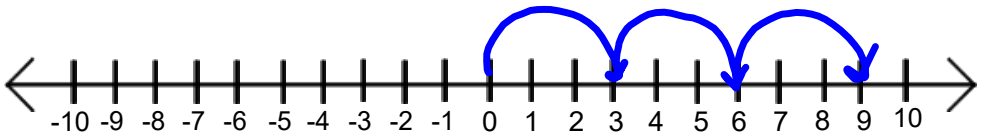
Multiplying Integers using number lines

Always start at zero

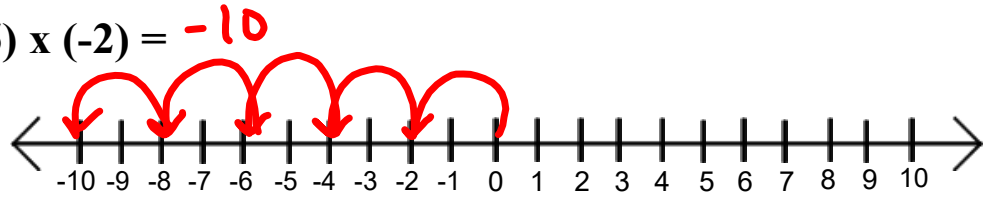
(a) (-4) x 2 = -8



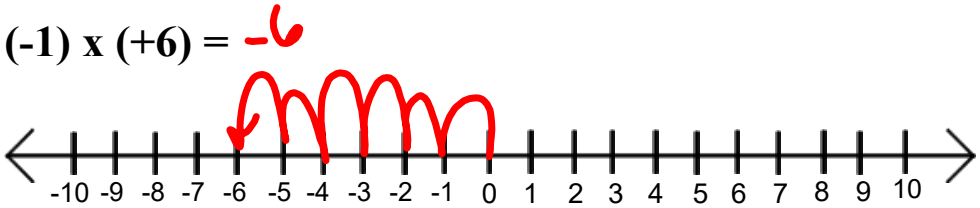
(b) (3) x (+3) = +9



(c) (5) x (-2) = -10



(d) (-1) x (+6) = -6

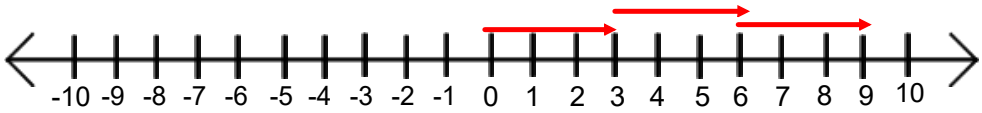


Multiplying Integers using number lines

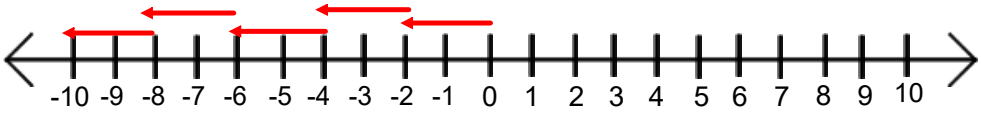
start at zero

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

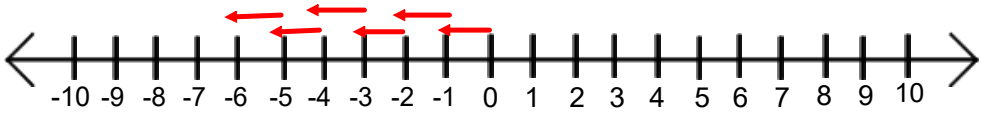
(b) (3) x (+3) = +9



(c) (5) x (-2) =



(d) (-1) x (+6) =



Homework pg. 68 # 11-20

Page 68-69 #5, #6, #7, #8, #9(a,b,c,d), #10(a,b,c,d), #11(a,c,e), #12, #13, #14, #17(a,b), #20(a)

Oct 7 HW

Finish HW from supply teacher if you did not get it done

Pg 68 10) e,f

11) e,f