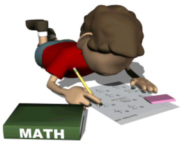
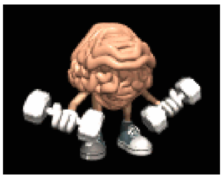


Grade 8 Warm Up
Unit 2 Integers (Day 2)
Sept. 12, 2016

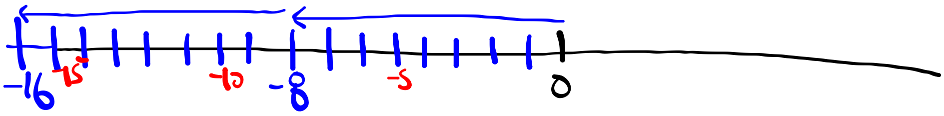


1) Write the multiplication expression for each repeated addition

a) (-2) + (-2) + (-2) + (-2) + (-2) + (-2) + (-2)   (+7) x (-2) = (-14)

b) (+7) + (+7) + (+7)   (+3) x (+7) = +21 or 3x(+7)
(+7) x 3

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



(+2) x (-8) = -16
put down 2 groups of -8

● ⇒ +
O ⇒ -

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

put down 3 groups of -5 (unshaded)

OOOOO   OOOOO   OOOOO

(+3) x (-5) = (-15)

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

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

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

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

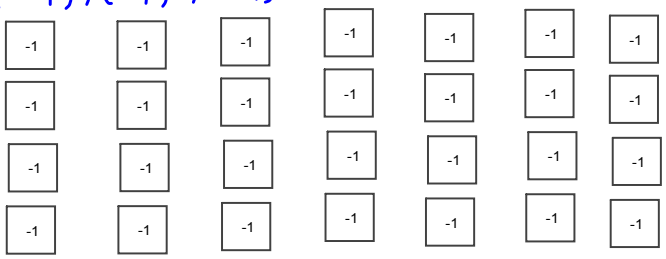
$5 \times (-2) = -10$

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

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

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

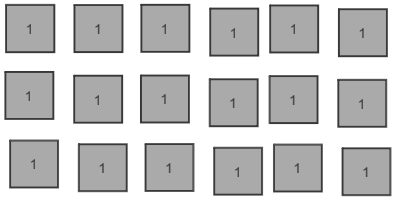
$(-4)+(-4)+(-4)+(-4)+(-4)+(-4)+(-4)$



$= -28$

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

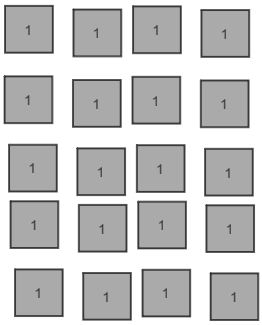
$(+6)+(+6)+(+6)$



$= +18$

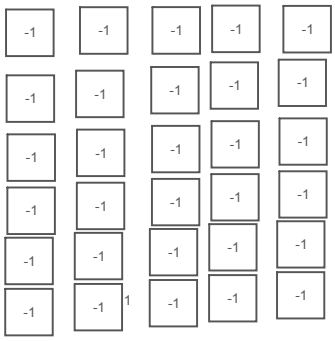
c) $(+4) \times (+6)$

$= +24$



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

$= -30$

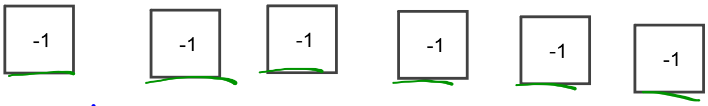


$(+7) \times (-4) = -28$

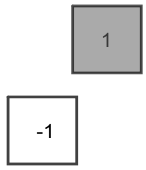
7a) $3 \times (+3) = {}^{+}9$

b) $4 \times (-2) = {}^{-}8$

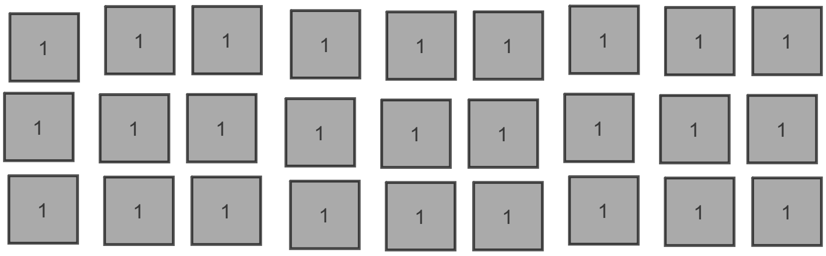
8a) $(+6) \times (-1)$



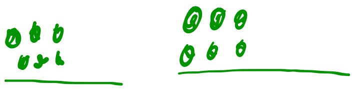
-6



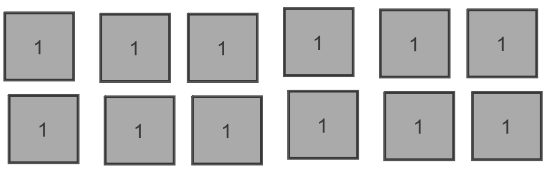
b) $(+3) \times (+9)$



$= +27$

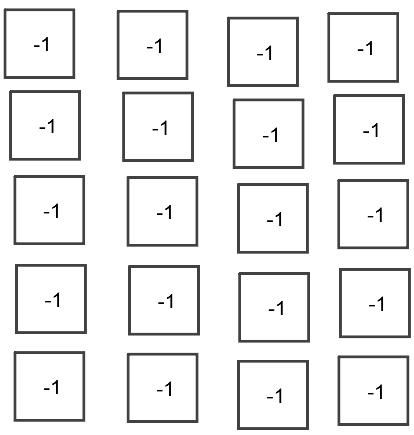


c) $(+2) \times (+6)$



$= +12$

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



$= -20$

From Last Math Class

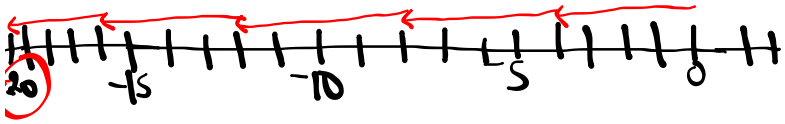
Multiplying Integers with Number lines and tiles

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

1) Use Number Line

(+5) x (-4) = -20

5 Jumps of -4



2) Use tiles

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

just down 2 groups of -6

000 000 000 000

3) Use tiles

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

take away 3 groups of (+4)

= 0000 0000 0000

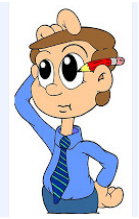
Must show going away

= 0000 0000 0000

Must model find answer

From Last Math Class

(continued)



Multiplying Integers with tiles

(-2) x (-4)

Ex) Use tiles

(-2) x (-4)

remove 2 groups of -4

need zero pairs

= 0000 0000 0000

= 0000 0000

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

Class/Homework

Page 68 - 69

#9(a,b,c,d),

#10(a,b,c,d),

#11(a,c,e),

#12,

#13,

#14, Don't model

#17(a,b), Don't model

#20(a)

Textbook

* Deposit => + put down

Withdraw => −

red tiles => − unsh

yellow => + shade

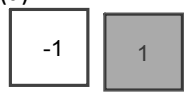
9a) Deposit 5 groups of 2 red tiles

(+5) X (−2)

b) Deposit 5 sets of 2 yellow

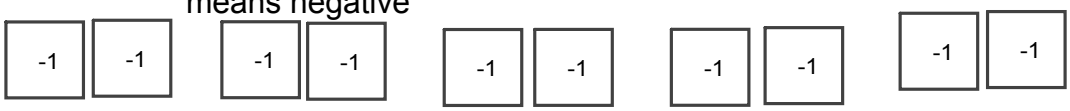
(+5) X (+2)

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)

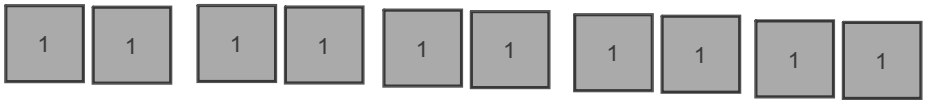


9a) 5 sets of 2 red tiles (+5) x (-2)

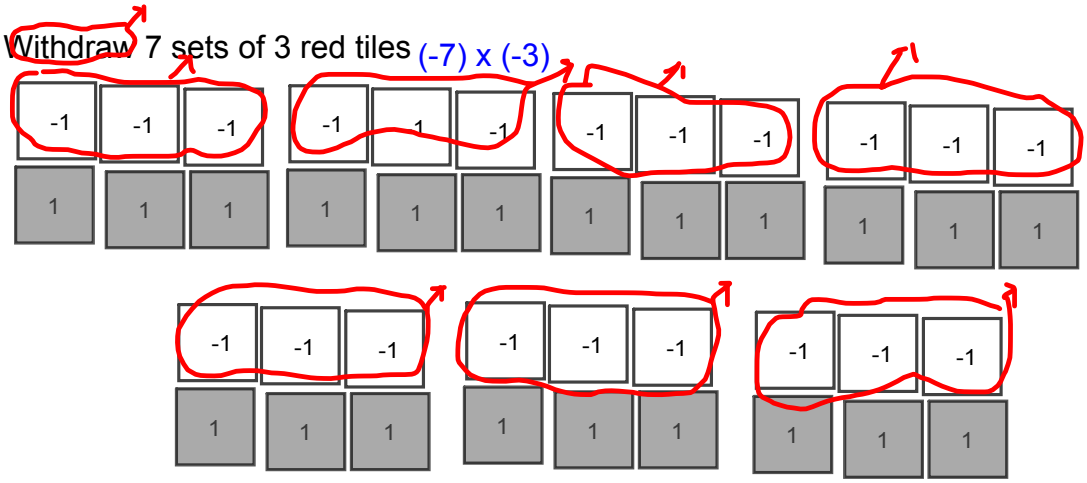
means negative



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



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



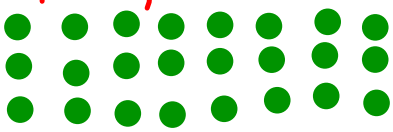
9d) Withdraw 9 sets of 4 yellow tiles

(-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)

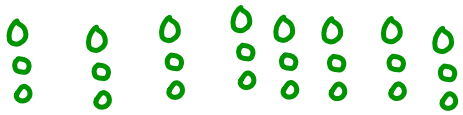
10 a) $(+1)\times(+5)=+5$

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

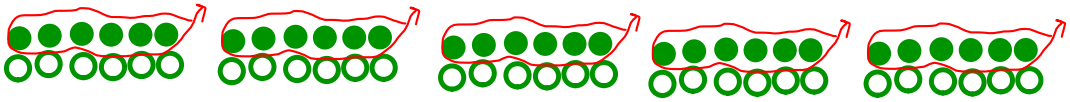


c) $(+7)\times(-2)=-14$

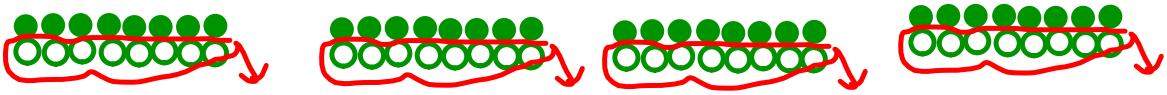
d) $(+8)\times(-3)=-24$



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?

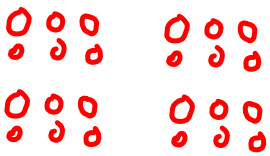
(+8) x (-6) = (-48)

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**

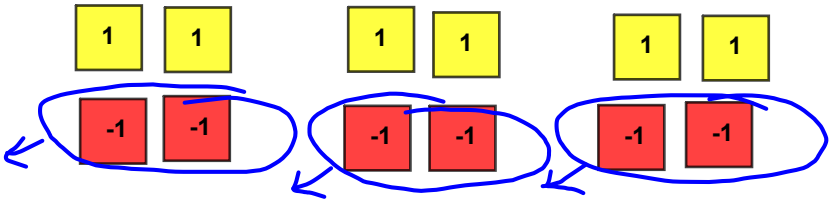
Multiplying Two Negative Integers Using Modeling

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

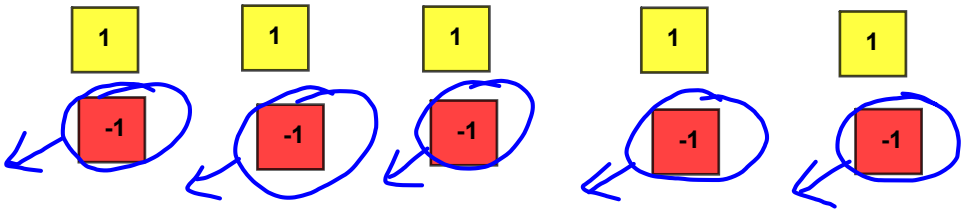
So (-2) x (-4) = +8

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

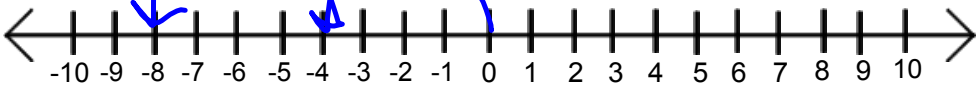
So when you multiply two negative integers, multiply the numbers and your answer will always be positive.

If done on day 2 , discuss using number lines

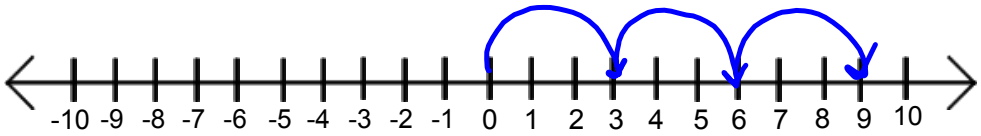
Multiplying Integers using number lines

Always start at zero

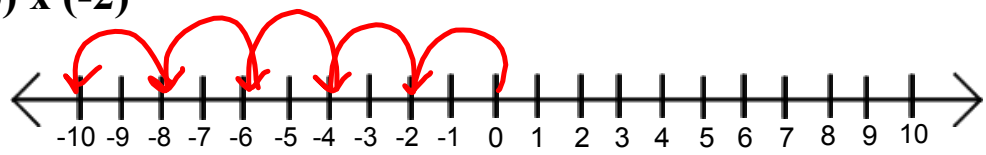
(a) (-4) x 2 = -8



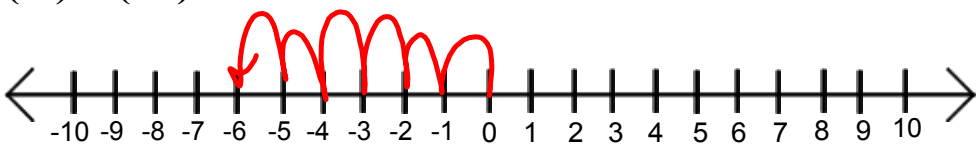
(b) (3) x (+3) = +9



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



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

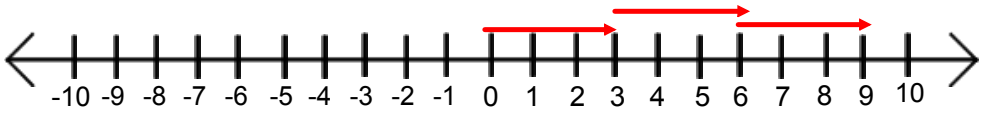


Multiplying Integers using number lines

start at zero

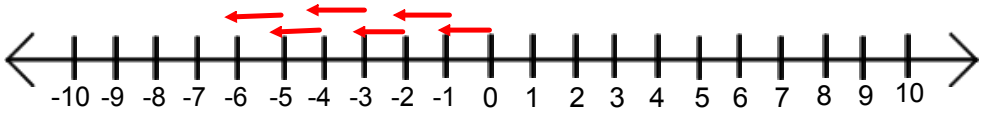
(a) (-4) x 2 = -8

(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