

Grade 8 Warm Up
Unit 2 Integers (Day 2)
Sept. 7, 2017



1) Write the multiplication expression for each repeated addition

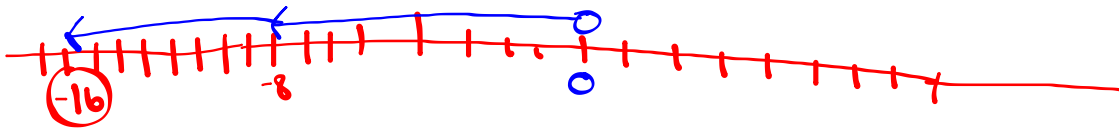
a) $(-2) + (-2) + (-2) + (-2) + (-2) + (-2) + (-2)$

$(+7) \times (-2)$

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

$(+3) \times (+7)$

2) Use a number line to find the product of $(+2) \times (-8) = -16$ (MUST draw the number line)
Arrows of size -8



3) Model $(+3) \times (-5)$ with tiles

Put down
3
groups
of -5

○○○○○

○○○○○

○○○○○

$= -15$

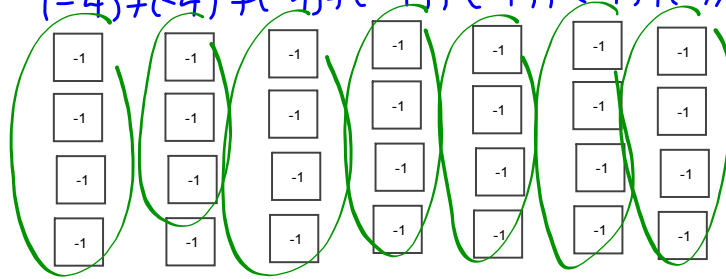
Homework Solutions

5a) $(-1) + (-1) + (-1)$
 $3 \times (-1) = -3$

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

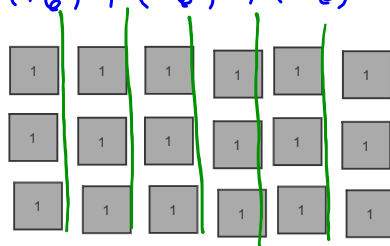
c) $(+1) + (+1) + (+1) + (+1)$
 $4 \times (+1) = +4$

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



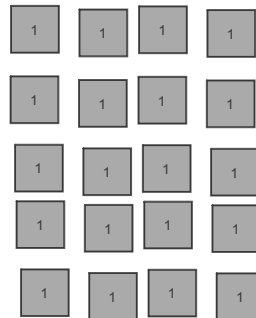
$= -28$

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

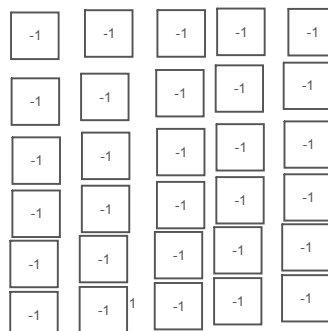


$= +18$

c) $(+4) \times (+6)$
 $= +24$



d) $(+5) \times (-6)$
 -30

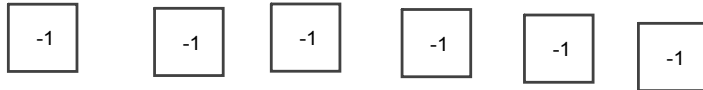
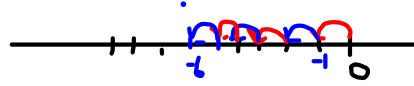


$$7a) \overset{\text{# of } (+)}{3} \times \overset{\text{size of } (+)}{(+3)} = +9$$

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

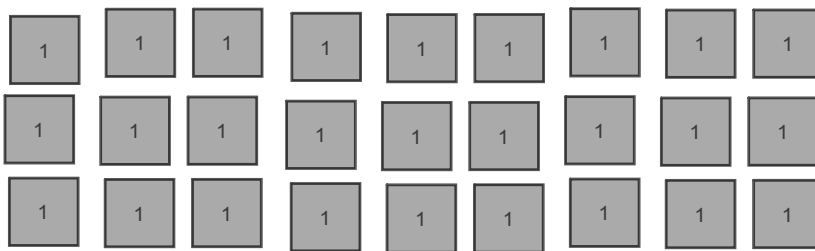
Homework Solutions

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



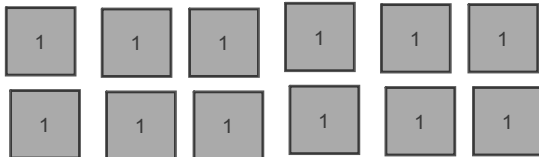
-6

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



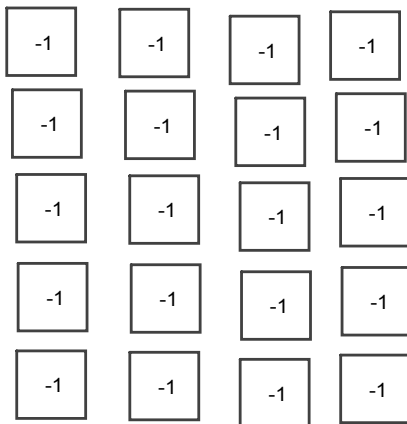
$$= +27$$

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



$$= +12$$

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



$$= -20$$

From Last Math Class

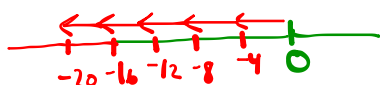


Multiplying Integers with Number lines and tiles

First integer's sign indicates whether you lay down tiles or take tiles away

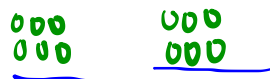
1) Use Number Line

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



2) Use tiles

$$(+2) \times (-6) = -12$$

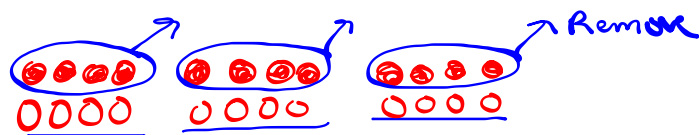


3) Use tiles

$$(-3) \times (+4)$$

W of +4 ← shaded
Remove 3 groups

Needed zero pairs



Left

$$= \text{○○○○} \quad \text{○○○○} \quad \text{○○○○}$$

$$= -12$$

From Last Math Class (continued)



Multiplying Integers with tiles

$(-2) \times (-4)$
w of -4 ← unshaded
Remove 2 groups

Need zero pairs

⊙ ⇒ + #

○ ⇒ - #



left



= +8

Class/Homework

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

#10(a, c, d), model

#11(a, e), model

#12, $() \times () = ()$

#13,

#14,

#17(a, b),

#20(a)

Deposit $\Rightarrow +$

Withdraw $\Rightarrow -$

Red $\Rightarrow =$ (unshaded)

Yellow $\Rightarrow +$ (Shaded)

don't model