Warm Up Grade 8

Grade 7 Review of Adding Integers

Both gr 7 & 8

Represent the following with a addition statement of integers, then find the sum:

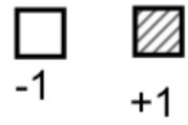
a)Karen lost $15 but found $20

$(-15) + (+20) = (+5)$

always show work

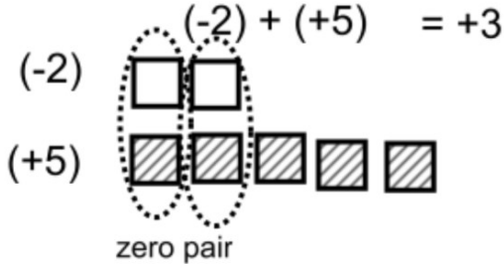
Rules From Grade 7 Integer Unit

Unit 2: Integers



Adding with tiles

-When you add integers you represent each integer in the addition statement. (Remove zero pairs and state answer)



Adding with Number lines

- Always start at zero

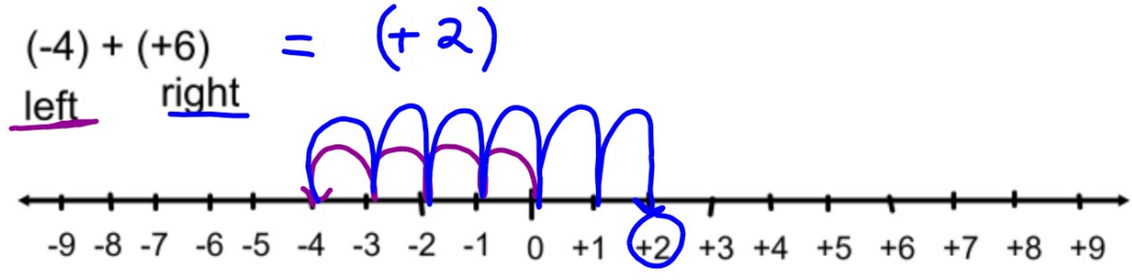
- Count the bumps in the road for the first integer

Move to the right ⇒ if positive

Move to the left ⇐ if negative

- When adding the second integer we count the bumps on the road in the direction given from where we ended with the first integer.

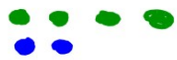
-Where you end up is the answer.



Modeling Integer Addition

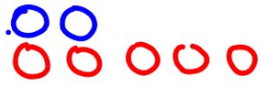
⊕ Shaded / Yellow
⊖ unshaded / Red

(+4) + (+2) = (+6)

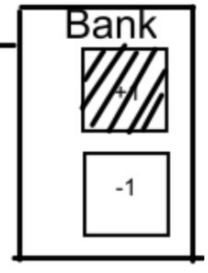


(-3) + (-3) = (−6)

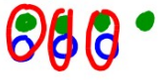
(-2) + (-5)



= −7



(+4) + (-3)



= (+1)

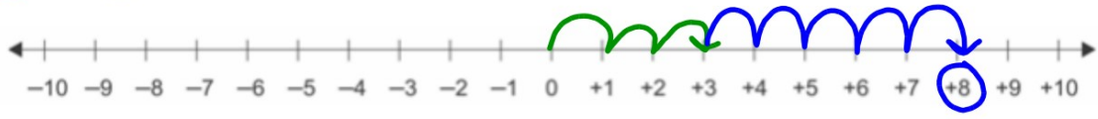
(-8) + (+4) = (−4)

Modelling Integer Addition using Number Lines

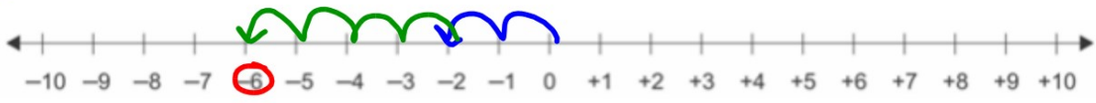
We have modelled integer addition using algebra tiles, now we will add using number lines. Remember with number lines positive is to the right and negative is to the left.

Always start at zero

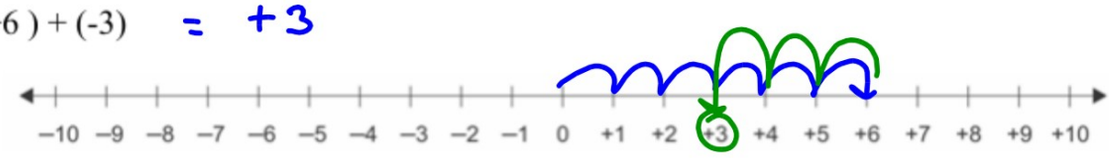
(a) (+3) + (+5) = (+8)



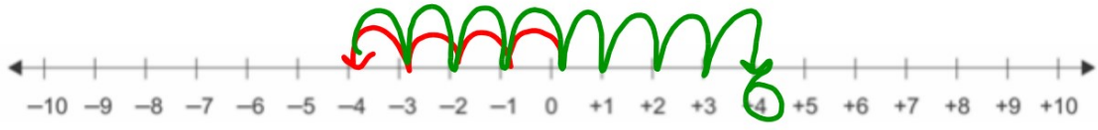
(b) (-2) + (-4) = -6



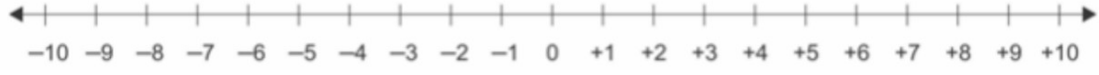
(c) (+6) + (-3) = +3



(d) (-4) + (+8) = +4



(e) (-7) + (+5)



Adding with Rules

-When we add two integers with the same signs:

Ex) 1

(-3) + (-7)= -10

both signs (-)

Thinking

3+7 = 10

both signs (-)

so answer is -10

Ex) 2

(+4) + (+8) = +12

both signs (+)

Thinking

4+8 = 12

So answer is +12

Both signs the same then just add both numbers together, ignoring the sign, and the answer has to have the same sign as the original integers

-When we add two integers with the **different signs**: (+) + (-)

Step 1) Cover up the signs and ask yourself which number is larger.

The answer will have the sign of the bigger number

Step 2) Since they are different, ignore the sign and find the difference between the two numbers (Big minus small). That is your number for the answer

(-12) + (+3) = -9

Different signs

step 1) When you cover up the signs, we have 12 & 3.

12 is Larger so our answer will have the sign on 12 which is (-)

step 2) 12 - 3 = 9

Ex) (+2) + (-7) = -5

Different signs

Step 1) between 2 & 7 , 7 is bigger so the sign on 7 goes with the answer (-)

Step 2) 7-2 = 5

Add the following using the rules.

(a) (+12) + (-9) = +3

(b) (-8) + (-3)= -11

(c) (-15) + (-6) = -21

(d) (+14) + (-4) = +10

(e) (+6) + (-12) = -6

(f) (-25) + (+16) = -9

(g) (-17) +(-7) = -24

(h) (+30) + (-21) = +9

(i) (-8) + (+12) = +4

(j) (+6) + (+8) = +14

(k) (-16) + (+14) = -2

(l) (+20) + (-7) = +13

Rules for Adding Integers

When you add two positive integers,
add the numbers and your answer will be positive.
Ex. (+6) +(+8) = +14 **(+11) + (+9) = +20**

When you add two negative integers,
add the numbers and your answer will always be negative.
Ex. (-5) + (-7) = -12 **(-8) + (-10) = -18**

When you add a positive integer and a negative integer,
subtract the numbers, and keep the sign of the larger number.
Ex. (-6) + (+8) = +2 **(+4) + (-9) = -5**

(+9) + (-12) = -3 **(-15) +(+20) = +5**

Test _____

Day 2 of Review

Class/Homework

Red ⇒ ⊖ unshaded
Yellow ⇒ ⊕ Shaded

pg. 79
1(a,c),
#2(a,b,c,d,e),
#3(a,b,c,d), Use Tiles or Write out ( )+( )=__
#4(a,b,c,d) , Write out ( )+( )=__
#5(a,b), Write out ( )+( )=__
#6, Write out ( )+( )=__
#7(a,b), Write out ( )+( )=__
#8(a,b,c,d) USE TILES