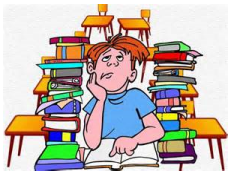
■ = +1
○ = -1

Warm Up Grade 8

Tuesday, Sept. 19

Grade 7 Review



1) Model the following using tiles

a) (-7) + (-2) ○○○○○○○ ○○ = -9

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

■■■■ ○○○○○○

2) Use rules to answer the following:

a) (-15) + (+13) = -2

b) (+32) + (+5) = +37

c) (+16) + (-27) = -11

d) (+45) + (-21) = +24

e) (-15) + (-20) = -35

f) (-100) + (+14) = -86

3) Represent the following as an addition statement:

a) The temperature is 15°C at lunch then drops 4°. What is the new temperature?

(+15) + (-4) = (+11)

The new temperature is +11°C

Homework Sheet 235 # 1-7

Homework Solutions

1a) (+5) + (+1)

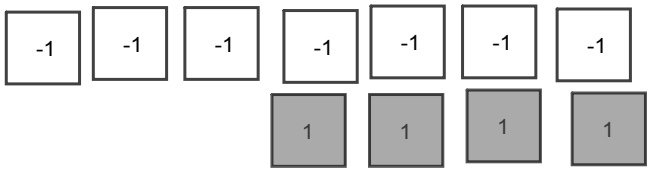
= +6

b) (-1) + (+8)

= +7

c) 0 + (-5) = -5

d) (-7) + (+4)

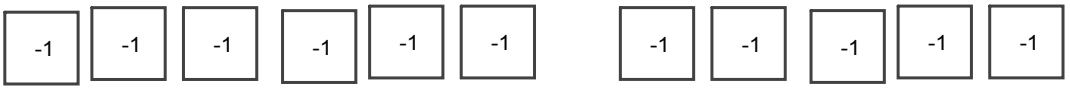


= -3

e) (-2) + (-2)

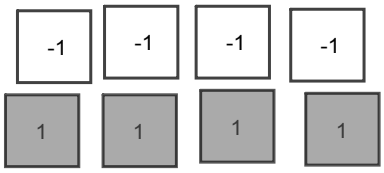
= -4

f) (-6) + (-5)



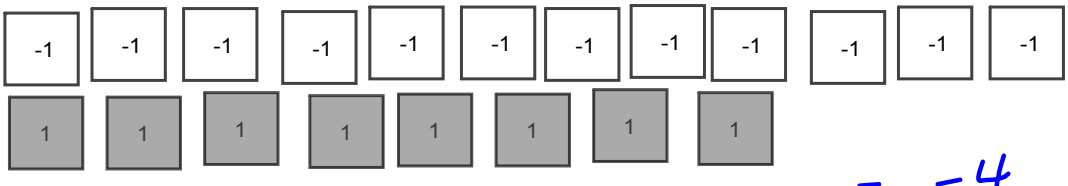
= -11

g) (+4) + (-4)



= 0

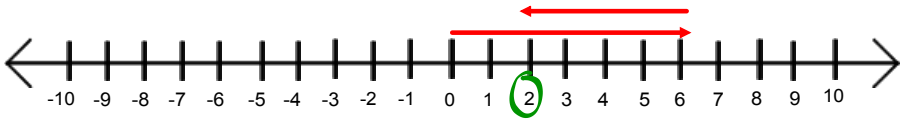
h) (-12) + (+8)



= -4

Homework Solutions
Sheet 235

2 a) (+6)+(-4)

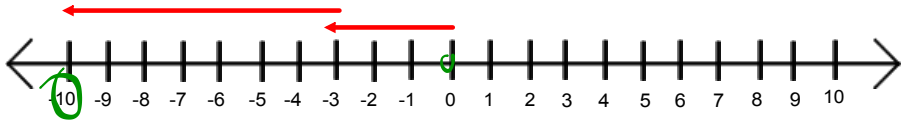


= +2

b) 0+(-2)

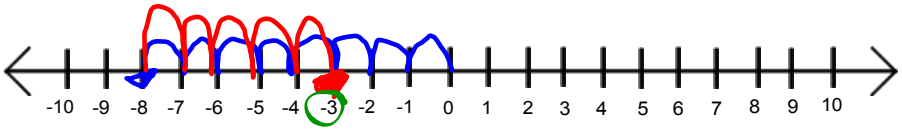
= -2

c) (-3)+(-7)



= -10

d) (-8)+(+5)



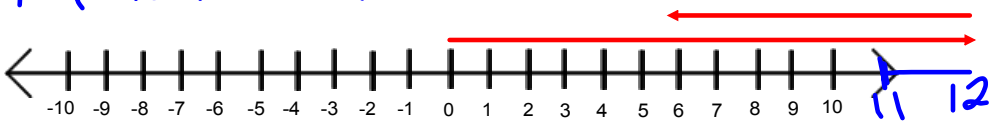
= -3

e) (-9)+(+9)

= 0

f) (+12)+(-6)

(+12)+(+6)= +18



= +6

g) (-14)+(-1) = -15

h) (+3)+(-14) = -11

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

b) $(-1)+(-3)=-4$

c) $(+3)+(-2)=+1$

d) $(-5)+(+2)=-3$

e) $(+2)+(-1)=+1$

f) $(+6)+(-6)=0$

4a) $(+2)+(+3)=+5$

b) $(-3)+(+4)=+1$

c) $(-4)+(-5)=-9$

d) $(+8)+(-1)=+7$

e) $(-10)+(-6)=-16$

f) $(+4)+(-13)=-9$

5) a $(-4)+(+7)=+3$

b) $(0)+(-6)=-6$

Homework Solution
sheet 235

6 a) $(+7) + (-5) + (+6)$

$(+2) + (+6) = +8$

b) $(-9) + (+2) + (-3)$

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

c) $(+1) + (-6) + (+4) + (-7)$

$(+5) + (-13) = -8$

d) $(-3) + (+5) + (-1) + (+8)$

$(+2) + (-1) + (+8)$

$(+1) + (+8)$

$+9$

e) $(+12) + (-9) + (+11) + (-20)$

or (+23) + (-29)

-6

f) $(-13) + (+25) + (-5) + (-17)$

$(+12) + (-5) + (-17)$

$+7 + (-17)$

-10

$(+1) + (-6) + (+4) + (-7)$

$= (-5) + (+4) + (-7)$

$(-1) + (-7)$

-8

c) $(+1) + (-6) + (+11)$

$(-5) + (+11)$

$+6$

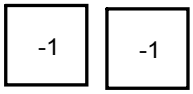
Subtracting Integers using modeling

Notes

May need to add zero pairs in order to subtract

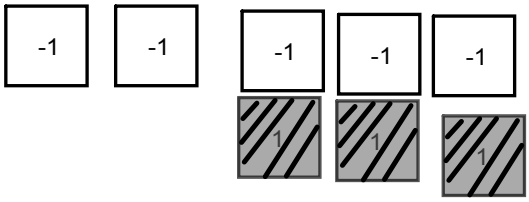
(-2) - (-5)

Step 1) Model the first integer

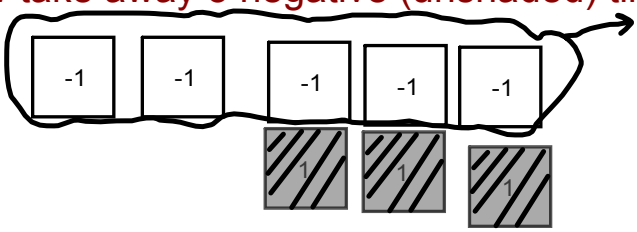


There are not enough tile to take away -5. To take away -5, we need 3 more negative tiles.

Sept 2) We add ZERO pairs without changing the value.
Add 3 shaded and 3 unshaded to tiles.



Sept 3) Now take away 5 negative (unshaded) tiles.



+3 left

(-2) - (-5) = (+3)

Subtracting with tiles

( ) − ( )

remove

-1 +1

- Always model the first integer

-Remove second integer

*if there are not enough to remove then add zero pairs of tiles and it does not change the question

Ex1) (-7) - (-3)

remove 3 unshaded

= −4

= 0000

Ex2) (-5) - (+2)

remove 2 ⊕ shaded

= 00000 00 = −7

Step 2)

Need to add zero pairs (two positive and 2 negative)

Step 3) Now remove __positive tiles

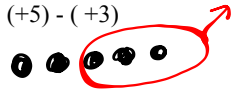
=

Your Turn

Subtracting Integers using modeling

May need to add zero pairs in order to subtract

(+5) - (+3)



+2

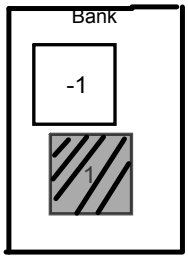
= ● ●

(-8) - (-4)

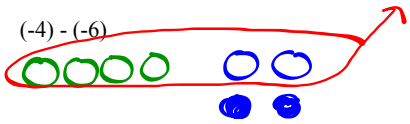
= ○○○○

= -4

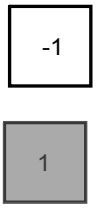
~~(+6) - (-5)~~



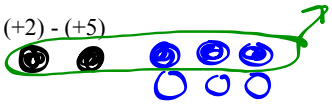
(-4) - (-6)



= +2

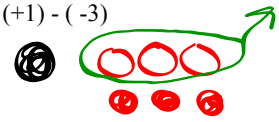


(+2) - (+5)



= -3

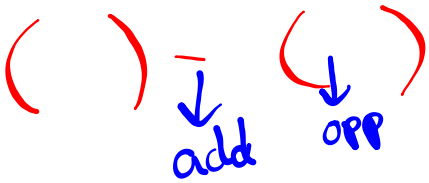
(+1) - (-3)



= ● ● ● ●

+4

Subtracting Rule



- Keep the sign on the first integer and "ADD the OPPOSITE"

Keep sign the same on the first integer
change the subtraction to addition and
change the sign on the second integer.
THEN USE ADDITION RULES

Ex 1) (+9) - (-5)

(+9) + (+5) ⟷ must show this step

now addition rule

(+9) + (+ 5) = +14

$(+2) - (-3)$

opp

$(+2) + (+3)$

$(+5)$

Subtracting Integers

→ add the opposit

→ switch subtracting sign to addition

→ switch sign after subtraction to opposite

Use the rule for Subtraction to answer the following:

(show work)

(a) (+8) - (+5) =

(+8) + (-5) +3

(b) (-6) - (-4) =

(-6) + (+4) -2

(c) (-7) - (-6) =

(-7) + (+6) -1

(d) (+5) - (-2) =

(+5) + (+2)

+7

(e) (-4) - (+4) =

(-4) + (-4) -8

(f) (+2) - (-3) =

(+2) + (+3) +5

(g) (-5) - (-6) =

(-5) + (+6) +1

$(+7) + (-2) - (-3)$

$(+5) \quad - \quad (-3)$

$\downarrow \qquad \downarrow$ OPP

$(+5) \quad + \quad (+3)$

$+8$

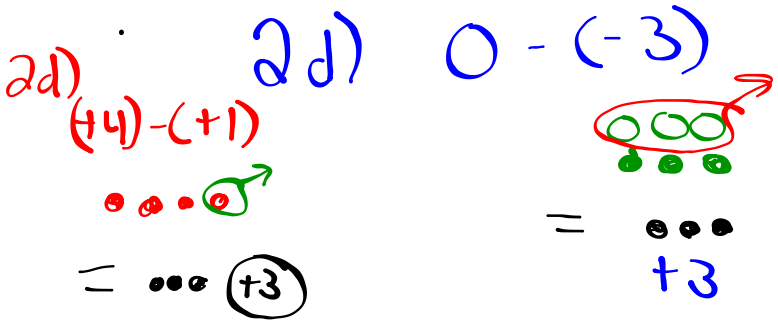
$(+6) - (+2) + (-3)$

Class/Homework

Quiz On Rules

sheet 283 Adding, Subtracting, Multiplying, Dividing

1 to 6 all Questions (Show work)



Warm Up Quiz tomorrow on rules of add, subtract, multiply and divide

Attachments

Grade 8 Math SHEET 235.docx

Grade 8 Math SHEET 283 Subtraction review.docx