

SSR

Read silently until 9:15

Oct 21-8:26 PM

Modeling Addition Opener

1. 300 students attended the last dance. If 40% of the students were 7th graders, how many non-7th graders attended?

180

2. Order the integers from least to greatest:

|-9|, 3, -4, |5|, 0

↓
↓

9 5

-4, 0, 3, 5, 9

3. A map has a scale of 2 cm = 50 km. If two cities appear 10 cm apart, how many kilometers apart are they really?

$\frac{25\text{km}}{1\text{cm}} = 250\text{km}$
is 10cm

~~50 km = 2x~~

~~2x = 10~~

500 = 2x

250 = x

X = 250 km

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Learning Target

I understand that additive inverses are a number and its opposite.

I can model addition using properties of additive integers and chips.

I can model addition using a number line.

May 10-12:13 PM

Opposites (Additive Inverse)

LIST AS MANY PAIRS OF OPPOSITES AS YOU CAN:

P O S I T I V E	A.	1	↔	A.	-1	N E G A T I V E
	B.	2		B.	-2	
	C.	9		C.	-9	
	D.	23		D.	-23	
	E.	21		E.	-21	
	F.	13		F.	-13	
	G.	15	↔	G.	-15	
	H.	72		H.	-72	
	I.	107		I.	-107	
	J.	103		J.	-103	
	K.	999		K.	-999	
	L.	66666		L.	-66666	
	M.	5657	↔	M.	-5657	
	N.			N.		

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Think about it with your table...

1. If start at the bottom of a staircase and go up three steps and then down three steps, where do you end up?

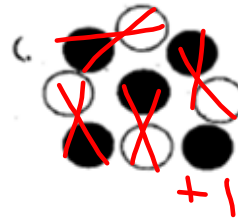
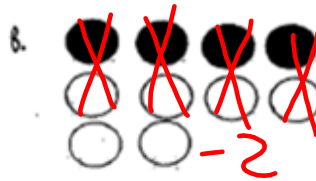
2. From a start line, if you take four steps to the left, and the four steps to the right, where do you end up?

3. If you deposit \$10 into an empty bank account, and then withdraw \$10 from the account, how much money is left in the account?

4. If you start at zero and add 7, then subtract 7, where do you end up?

5. What do opposites do to one another? *they cancel each other out*

6. Consider the models below. Let a black circle represent a +1 and a white circle represents a -1, what are we left with?





A number and its opposite are called additive inverse. Additive inverses sum to 0.

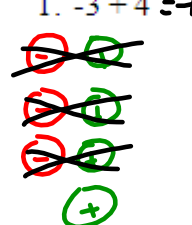
Aug 28-3:51 PM

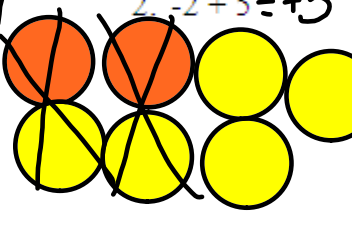
MODEL ADDITION WITH CHIPS

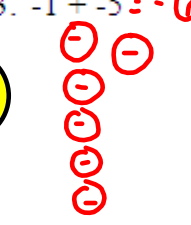
Let the red chips be -1, and yellow be +1.

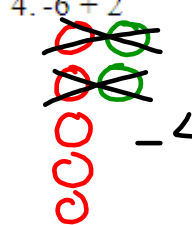
Part I: Model using chips

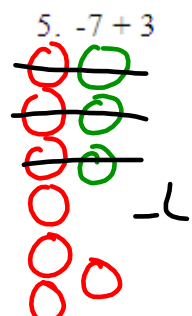
\ominus \oplus  = +1  = -1

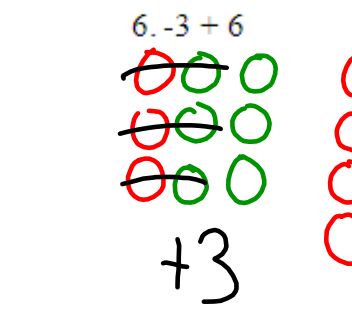
1. $-3 + 4 = +1$ 


2. $-2 + 5 = +3$ 

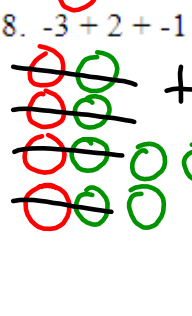
3. $-1 + -5 = -6$ 

4. $-6 + 2$ 

5. $-7 + 3$ 

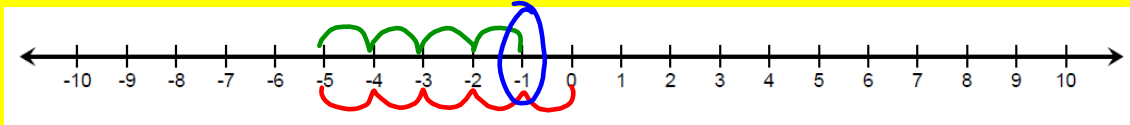
6. $-3 + 6$ 

7. $-4 + -3$ 

8. $-3 + 2 + -1 + 5$ 

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ADDITION ON THE NUMBER LINE



$$-5 + +4 = -1$$

Negative number go to the left

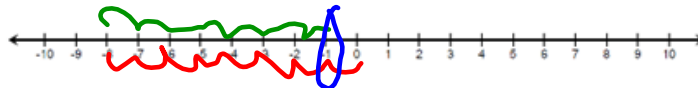
Positive number go to the right

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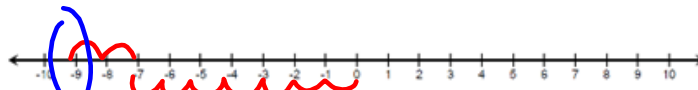
Part 2: Number Line Model

Use the number line to model each addition problem, then find the sum.

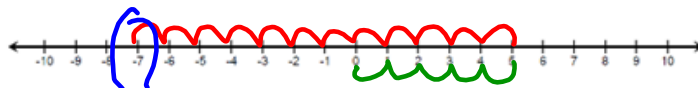
7. $-8 + 7$
 $= -1$



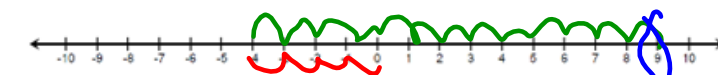
8. $-7 + (-2)$
 $= -9$



9. $5 + (-12)$
 $= -7$



10. $-4 + 13$
 $= 9$



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Summary

TABLE DISCUSSION: WHEN YOU ADD TWO NEGATIVE INTEGERS, IS THE SUM LARGER OR SMALLER THAN THE INDIVIDUAL ADDENDS?

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Vocabulary pg 44

Integers — a positive number, a negative number or zero but **NOT** a fraction or a decimal
 ex. -7, 13, 0 ~~$\frac{1}{2}$~~ ~~.75~~

Absolute Value — the distance a number is from zero on the numberline written as $|x| = x$ OR $|-x| = x$.

ex $|-5| = 5$

May 10-8:54 AM

Additive Inverse - two numbers
added together that are
opposites and therefore
cancel each other out
resulting in zero.
ex. $-6 + 6 = 0$

Aug 28-3:53 PM

Oct 29-9:02 PM