S-PA Pre-Algebra Session 4 6/21

$4x + 6y - 2z$ $\quad x = 3 \quad y = 4 \quad z = 5$

$4(3) + 6(4) - 2(5)$

$12 + 24 - 10$

$36 - 10 = \boxed{26}$

1.) $7p + q(3+r)$ $\quad p = 3 \quad q = 2 \quad r = 4$

$7(3) + 2(3+4)$

$21 + 2(7)$

$21 + 14 = \boxed{35}$

2.) $\frac{36}{j} - 4(k+m)$ $\quad j = 2 \quad k = 1 \quad m = 3$

$\frac{36}{2} - 4(1+3)$

$\frac{36}{2} - 4(4)$

$18 - 16 = \boxed{2}$

Absolute Value - the distance between a number and zero on the number line.

$|-3| = 3$ $|4| = 4$ $-|-7| = -7$ $-|8| = -8$

Compare using $>$ $<$

Greater than

Less than

1.) $|-3| \quad |-1|$

$3 > 1$

2.) $|-1| \quad |1|$

$1 = 1$

3.) $|-3| \quad |2|$

$3 > 2$

4.) $-3 > -5$

5.) $5 \quad |-4|$

$5 > 4$

6.) $-6 < -4$

7.) $|-2| \quad 3$

$2 < 3$

8.) $4 \quad |-2|$

$4 > 2$

Adding Integers

positive ↓ , negative ↓

$5 + (-8) =$

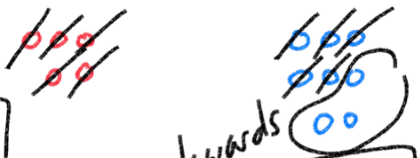
1 If signs are different, take their difference.

If signs are same, take their sum

Larger sign wins ⊖

$8 - 5 = 3$ → -3

2



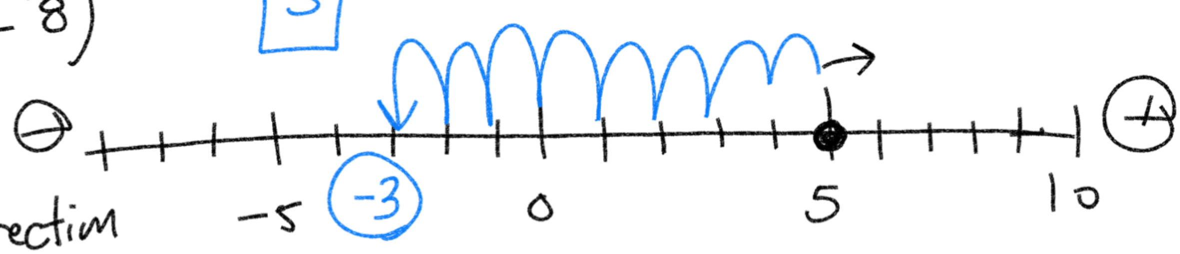
backwards 8

$\boxed{-3}$

3

$5 + (-8)$

start ↑ (5), direction facing ↑ (+), backwards 8 ↓ (−)

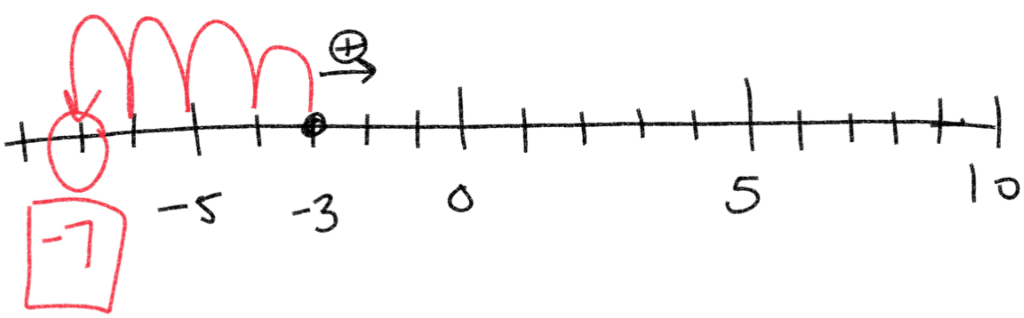


$-3 + (-4) = \boxed{-7}$

start ↓ -3, $+$ direct facing, -4 backwards 4

same signs, take their sum

$3 + 4 = 7$



1.) $-4 + 10$

$10 - 4 = 6$

2.) $8 + (-4)$

$8 - 4 = 4$

3.) $4 + (-10)$

$10 - 4 = 6$

-6

4.) $-8 + (-4)$

-12

5.) $4 + 10$

14

6.) $-8 + 4$

$8 - 4 = 4$

-4

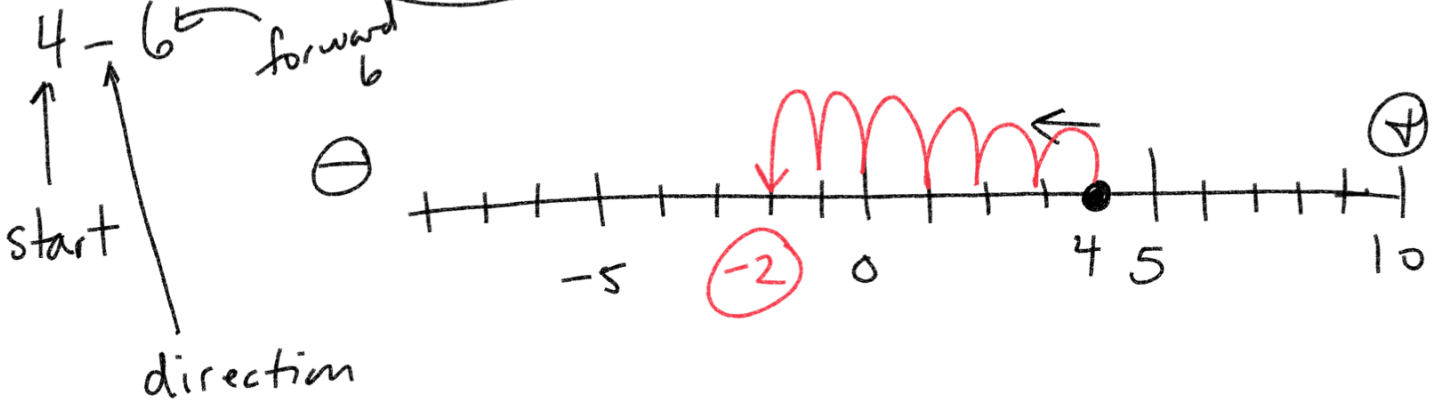
7.) $-4 + (-10)$

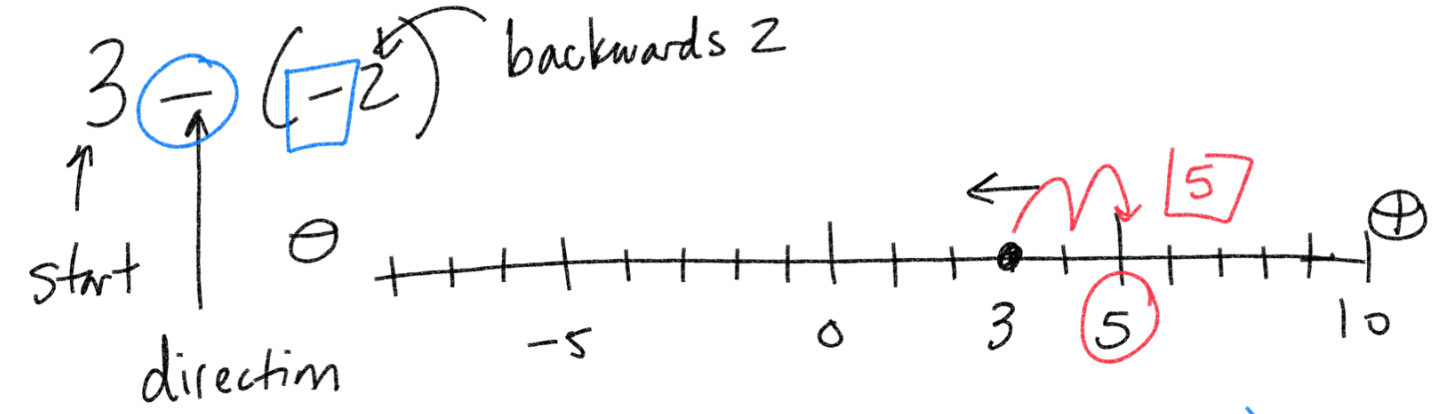
-14

8.) $8 + 4 = 12$

Subtracting Integers

$4 - 6 \qquad 4 + (-6) = -2$





same → ⊕
different → ⊖

$3 - (-2)$

$3 + 2 = 5$

$3 + (+2)$

$3 + 2 = 5$

forward 5

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

$3 + +2 = 3+2$

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

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

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

1.) $-5-3$

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

2.) $5-3=\boxed{2}$

3.) $5-(-3)$

$5+3=8$

4.) $-5-(-3)$

$-5+3=\boxed{-2}$

1.) $9-(-6)$

$9+6=15$

2.) $-9-(-6)$

$-9+6=\boxed{-3}$

3.) $9-6=3$

4.) $-9-6=-15$

$-9+(-6)$

1.) $8-11=\boxed{-3}$

$8+(-11)$

2.) $-8-(-11)$

$-8+11=\boxed{3}$

3.) $-8-11=\boxed{-19}$

$-8+(-11)$

4.) $8-(-11)$

$8+11=\boxed{19}$

Mult/Dividing Integers

Public School

CONFORMITY!!

You	Everyone Else	Sitvation
Happy	Happy	Good
Sad	Happy	Bad
Happy	Sad	Bad
Sad	Sad	Good!!

$(-7) * 8 = -56$

$7 * -8 = -56$

Different signs $\rightarrow \ominus$

$7 * 8 = 56$

$(-7) * (-8) = 56$

Same signs $\rightarrow \oplus$

1.) $\overset{\oplus}{4} * \overset{\ominus}{(-12)} = \boxed{-48}$

2.) $\overset{\oplus}{4} * \overset{\oplus}{12} = \boxed{48}$

3.) $\overset{\ominus}{-4} * \overset{\oplus}{12} = \boxed{-48}$

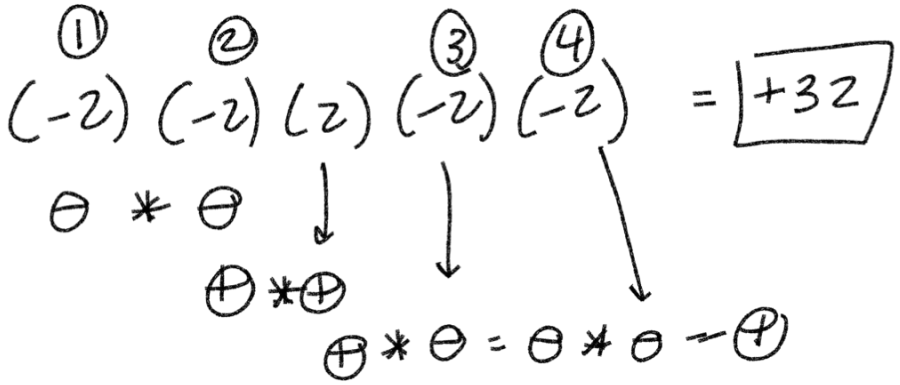
4.) $\overset{\ominus}{-4} * \overset{\ominus}{(-12)} = \boxed{48}$

5.) $\dfrac{\overset{\ominus}{-36}}{\underset{\oplus}{9}} = \boxed{-4}$

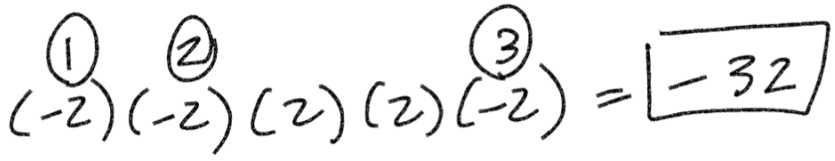
6.) $\dfrac{\overset{\ominus}{-36}}{\underset{\ominus}{-9}} = \boxed{4}$

7.) $\dfrac{36}{9} = \boxed{4}$

8.) $\dfrac{\overset{\oplus}{36}}{\underset{\ominus}{-9}} = \boxed{-4}$



Even number of negative numbers → positive



Odd number of negative numbers → negative