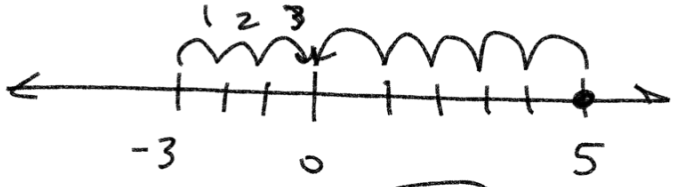
W- Algebra 1 10/6

Absolute Value - distance from a number to zero on the number line



$|5| = 5$

$|-3| = 3$

$|-2| = 2$

$-|4| = -4$

$-|-5| = -5$

$|8-4| = |4| = 4$

$|5-7| = |-2| = 2$

1.) $6 + (-4) = 2$ (6 − 4)

2.) $-6 + 4 = -2$

3.) $6+4 = 10$

4.) $-6+(-4) = -10$

5.) $3+7 = 10$

6.) $-3+7$ 4

7.) $-3 + (-7) =$ −10

8.) $3+(-7) =$ −4

1.) $-9-6 = -15$ 2.) $9-6$ 3 3.) $9-(-6) = 15$

$+\ +$

$9+6=15$

+ forward
− backward

4.) $-9-(-6)$ → -3

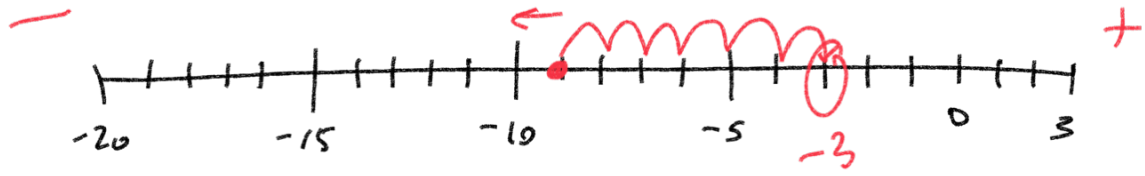
5.) $7-11 = -4$ 6.) $-7-11$ -18

7.) $-7-(-11)$

$-7+11$ 4

8.) $7-(-11)$

$7+\ +11$ = 18



same → ⊕ different → ⊖

1.) $-7*6 = -42$ 2.) $7*(-6) = -42$ 3.) $7*6 = 42$

4.) $-7*(-6) = 42$ 5.) $-3*(-12)$ 36 6.) $3*(-12) = -36$

7.) $3*12 = 36$ 8.) $-3*12 = -36$

ODD # → ⊖ EVEN # → ⊕

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

-32

10.) $(-2)(-2)(-2)(2)(2)(-2)$

64

Distributive Property

$2(5x+4) =$

$10x + 8$

$(3x+4)7$

$21x + 28$

$4(7x-3)$

$28x - 12$

$-(-6x-3) = -1(-6x-3)$

$6x + 3$

$\frac{1}{4}\left(\frac{12x}{1} - \frac{8}{1}\right)$

$3x - 2$

$\frac{1}{4} * \frac{12x}{1} = \frac{12x}{4} = 3x$

$\frac{1}{4} * \frac{-8}{1} = \frac{-8 \div 4}{4 \div 4} = -\frac{2}{1} = -2$

1.) $-5(8-b) =$

$-40 + 5b$

2.) $-(3k-12)$

$-3k + 12$

3.) $5(t-3) - 2t$

$5t - 15 - 2t$

$3t - 15$

4.) $4(2x+7)$

$8x + 28$

5.) $5(3x+12)$

$15x + 60$

6.) $-6 - 3(2k+4)$

$-6 - 6k - 12$

$-6 - 12$

$-6k - 18$

$(27 + 28) + 73 = 27 + 73 + 28$

$100 + 28 = 128$

Add ⅓ Multiplication ORDER DOES NOT MATTER

$3+4=4+3$ $\quad 5*8=8*5$

$(3+8)+7 = 3+7+8$

$10+8=18$

COMMUTATIVE PROPERTY

$(77*4)*25 = 77*(4*25)$

$7700 \quad 77*100 = 7700$

Add ⅓ Multiplication
change order of Parenthesis

Associative Property

Identity Properties → What it is

$5 + 0 = 5$ $\qquad$ $6 * 1 = 6$

$a + 0 = a$ $\qquad$ $a * 1 = a$

Inverse Properties → How it dies

$8 + (-8) = 0$

add opposite

$a + (-a) = 0$

$\frac{8}{1} * \frac{1}{8} = 1$ $\qquad$ inverse reciprocal

$a * \frac{1}{a} = 1$

$\frac{3}{4} * \frac{4}{3} = 1$