W-PA Pre-Algebra Week 2 9/13

(+) Plus, Add, altogether, more than, greater than, increased by, <u>SUM</u>

8 increased by 3

Numerical Expression: $\boxed{8 + 3}$

↳ has no equal sign

2 greater than 5

$\boxed{2 + 5}$

The sum of 9 and 6

$\boxed{9 + 6}$

7 more than a number

7 + x

variable represents any number "vary"

The sum of 9 and c

$9 + c$

(−) Subtract, minus, decreased by, less than, <u>DIFFERENCE</u>

The difference between 9 and 7

Numerical expression: $9 - 7$

switch order

8 less than 11 = 3

I II III IV V VI

Numerical expression

~~8 - 11 = -3~~

$\boxed{11 - 8}$

switch order

Take away 2 from 19

19 - 2

The difference between b and 8

b - 8

4 less than x

x - 4

(X) Multiply, times, PRODUCT

x * •

The product of a and 7

$\boxed{a * 7}$ or $\boxed{7 * a}$ or 7a

coefficient

7a

variable

÷ Divided by, QUOTIENT

numerator

Fraction

denominator

The quotient of 9 and y

$\boxed{9 \div y}$ or $\boxed{\frac{9}{y}}$

9_/_y

"quantity" → parenthesis ( )

"is" → equals

1.) j decreased by 9 $\boxed{j-9}$

2.) two more than y $\boxed{y+2}$ or $\boxed{2+y}$

3.) quotient of 42 and a number

$\boxed{42 \div x}$ or $\boxed{\frac{42}{x}}$ or $\boxed{42/x}$

4.) Product of a number d and 16

$\boxed{d * 16}$ $\boxed{16 * d}$ $\boxed{16d}$

5.) 9 less than k $\boxed{k-9}$

switch order

6.) two more than the sum of 18 and 6

2 + (18 + 6) $\boxed{2 + (18+6)}$ or $\boxed{2+18+6}$

7.) three times the quantity 2 plus a

$\boxed{3 * (2+a)}$

Order of Operations

PEMDAS

P parenthesis

E exponents

MD mult/div (in order from L→R)

AS add/sub (in order from L→R)

$3 + 4 * 5$

~~if no order~~

~~$3+4*5$~~

~~$7*5=35$~~

if order matters (PEMDAS)

$3+4*5$

$3+20=23$

multiplication is series addition

$3 + 4 * 5$

$3+4+4+4+4+4$

$7+4$ $11+4=15+4=19+4=23$

$50-20\div5$

P

E

MD

AS

~~$50-20\div5$~~

~~$30\div5=6$~~

$50-20\div5$

$50-4=46$

Division is series of subtraction

$20\div5$

$20-5$ (1)

$15-5$ (2)

$10-5$ (3)

5

$5-5$ (4)

0

$50 \div 25 * 2$

L ⟶ R

$50 \div 25 * 2$

$2 * 2 = 4$

~~$50 \div 25 * 2$~~

~~$50 \div 50 = 1$~~

P
E
MD
AS

$50 \div 25 * 2$

$50 * \frac{1}{25} * 2$

Division is inverse multiplication

$50 - 30 + 6$

~~$50 - 30 + 6$~~

~~$50 - 36 = 14$~~

Subtraction is inverse addition

$50 - 30 + 6$

$20 + 6 = 26$

$50 - 30 + 6$

$\underbrace{50 + (-30)}_{20} + 6$

$20 + 6 = 26$

~~P~~
~~E~~
same plane MD
AS same plane

$\underbrace{48 \div 12}_{4} * 3$

$4 * 3 = 12$

$\underbrace{18 - 12}_{6} + 5$

$6 + 5 = 11$

1.) $9 + 2 * 6$

$9 + 12 = \boxed{21}$

understood multiplication

2.) $16 - 3(6-4)$

$16 - 3(2)$

$16 - 6 = \boxed{10}$

3.) $5 + 3 \cdot 2 - 1$

$5 + 6 - 1$

$11 - 1 = \boxed{10}$

4.) $5 + 3 \cdot 4 - 8 + 2 \cdot 7$

$5 + 12 - 8 + 2 \cdot 7$

$5 + 12 - 8 + 14$

$17 - 8 + 14$

$9 + 14 = 23$

P
E
MD
AS

5.) $4 \cdot 10 + 8 \div 2 - 6 \cdot 3$

$40 + 8 \div 2 - 6 \cdot 3$

$40 + 4 - 6 \cdot 3$

$40 + 4 - 18$

$44 - 18 = \boxed{26}$