W-A1 Algebra 1 Week 3 9/20

switch the order

1.) 8 less than the sum of b and 9

+

$\boxed{(b+9)-8}$

8 less than 10

$8-10=2$

$10-8=2$

2.) 12 more than the quotient of 8 and x

$\boxed{\frac{8}{x}+12}$ $\boxed{12+(8\div x)}$ or $\boxed{(8\div x)+12}$

3.) The difference between c and the product of 8 and b

*

$\boxed{c-8*b}$ or $\boxed{c-8b}$

4.) The product of 8 and the sum of 14 and y

*

$\boxed{8(14+y)}$ or $\boxed{8*(14+y)}$

switch order

5.) 9 less than a number increased by 3

$(x+3)-9$

P
E
MD
AS

1.) $4 + 3(15 - 2^3)$

$4 + 3(15 - 8)$

$4 + 3(7)$

$4 + 21 = \boxed{25}$

2.) $5 + 16 \div 2 + 7 * 4$

$5 + 8 + 7 * 4$

$5 + 8 + 28 = 13 + 28 = \boxed{41}$

3.) $8 + 4^2 * 12 - 2^3 \div 8$

$8 + 16 * 12 - 8 \div 8$

$8 + 192 - 8 \div 8$

$8 + 192 - 1$

$200 - 1$

$\boxed{199}$

4.) $72 - (5+3)^2 + 4(12 - 3^2) \div 6$

$72 - (8)^2 + 4(12 - 9) \div 6$

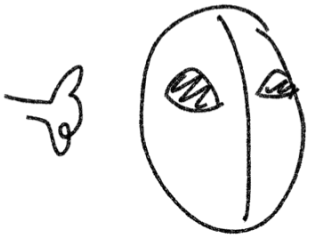
$72 - (8)^2 + 4(3) \div 6$

$72 - 64 + 4(3) \div 6$

$72 - 64 + 12 \div 6$

$72 - 64 + 2$

$8 + 2 = \boxed{10}$



spider-Man

Peter Parker

Evaluate

substitute

$2b = 2*b$

$a = 1 \quad b = 2$

$$\frac{a + 2b}{5}$$

Algebraic Expression

$$\frac{1 + 2(2)}{5} = \frac{1+4}{5} = \frac{5}{5} = \boxed{1}$$

$$\boxed{\begin{array}{c} P \\ E \\ MD \\ AS \end{array}}$$

$x + 3y^2 \qquad x = 3 \quad y = 4$

$3 + 3(4)^2$

$3 + 3(16)$

$3 + 48 = \boxed{51}$

1.) $7a - 4(b+2)$ $\quad a = \boxed{2} \quad b = \boxed{5}$

$7(2) - 4(5+2)$

$7(2) - 4(7) = 14 - 28 = \boxed{-14}$

2.) $(a^3 + b^2) \div a$ $\quad a = \boxed{3} \quad b = \boxed{2}$

$((3)^3 + (2)^2) \div 3$

$(27 + 4) \div 3$

$31 \div 3 = \boxed{\frac{31}{3}} = 10.\overline{3}$

Properties of Numbers

Real Numbers $\qquad$ Imaginary Numbers

Rational $\qquad$ Irrational

Rational numbers — can be put into a fraction.

Irrational numbers — cannot be put into a fraction.

Rational Numbers

Counting numbers 1, 2, 3, 4, 5, . . .

Whole numbers 0, 1, 2, 3, 4, 5, . . .

counting numbers and $\emptyset$

Integer - All whole numbers and their opposites

. . . -3, -2, -1, 0, 1, 2, 3, . . .

Terminal decimal 0.749 Rational

$$0.749 = \frac{749}{1000}$$

Repeating decimal $0.7777\ldots = 0.\overline{7}$ Rational

single $0.\overline{7} = \frac{7}{9}$

$0.\underbrace{283}\overline{283}\underbrace{283}\ldots$ Rational

group $0.\overline{283} = \frac{283}{999}$

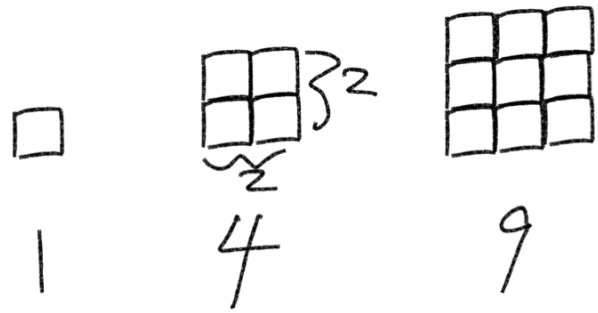
$0.\overline{712}\underbrace{713}\overline{714}\ldots$ irrational

no repeat

$0.681681681\boxed{}$ terminal

Perfect Square

$\sqrt{36} = \pm 6$



$\sqrt{49}$ perfect square
rational

$\sqrt{50}$ not perfect square
irrational

$\sqrt{1} = 1$

+3

$\sqrt{4} = 2$

+5

$\sqrt{9} = 3$

+7

$\sqrt{16} = 4$

+9

$\sqrt{25} = 5$

+11

$\sqrt{36} = 6$

+13

$\sqrt{49} = 7$

+15

$\sqrt{64} = 8$

<u>π is irrational</u>