BE-1A | Monday 8-20-07

① What kind of a decimal is $\frac{1}{8}$?

② What kind of a decimal is $\frac{8}{12}$?

③ In the expression 7^3, the 7 is called the _____ and the 3 is called the _____.

④ Evaluate 7^3.

⑤ Write an algebraic expression for: "the sum of 5 and the product of 3 and X."

- Hand out, review, return graded Quiz 1

EVALUATE:

$$4 + 2 \div 2 \cdot 4 - 3$$

If you do the +, −, ·, ÷ correctly there are still several possible answers. But a math expression needs to be very clear, so there will be only one correct way to evaluate it, and everyone who follows the Order of Operations

↓ sequence ↓ +, −, ·, ÷

Rules will get the same answer.

$4 + 1 \cdot 4 - 3$

$4 + 4 - 3$

$8 \quad -3 \quad = \boxed{5}$ correct answer

A simple +, −, •, ÷ CALCULATOR will not, except by accident, follow the correct Order of Operations Rules, a scientific calculator will.

You will be provided a simple +, −, •, ÷ calculator for the AHSGE so you must know how to follow the Order of Operations rules.

The rules:

PE(MD)(AS)

① ② ③ ④

- PARENTHESES
- EXPONENTS
- MULT. or DIVIDE
- ADD or SUBTRACT

÷ may come before •

− may come before +

- Parentheses means ANY grouping symbol such as:

  ( )
  [ ]
  { }

- Each group IS ITS OWN PE(MD)(AS) problem

Lets go back and try the BE:

$4 + 2 \div 2 \cdot 4 - 3$ No P, No E

$4 + 1 \cdot 4 - 3$

$4 + 4 - 3$

$8 - 3$

$\boxed{5}$

PE$(\overrightarrow{mD})(\overrightarrow{AS})$ is usually written this way because of the famous memory aid ⇒ Please Excuse My Dear Aunt Sally

BUT...

If would be just as correct to write it

PE$(\overrightarrow{Dm})(\overrightarrow{SA})$

Ex 1 Pg 11

ⓐ $3 + 2 \cdot 3 + 5$

$3 + 6 + 5$

$9 + 5 = \boxed{14}$

ⓑ $15 \div 3 \cdot 5 - 4^2$

$15 \div 3 \cdot 5 - 16$

$5 \cdot 5 - 16$

$25 - 16 = \boxed{9}$

EX2 Pg12

(a) $2(5) + 3(4+3)$

$2(5) + 3(7)$

$10 + 3(7)$

$10 + 21 = \boxed{31}$

(b) $2\left[5 + (30 \div 6)^2\right]$

$2\left[5 + (5)^2\right]$

$2\left[5 + 25\right]$

$2\left[30\right] = \boxed{60}$

EX3 Pg12

$$\frac{6+4^2}{3^2 \cdot 4} = \frac{(6+4^2)}{(3^2 \cdot 4)}$$

$$= \frac{(6+16)}{(9 \cdot 4)}$$

$$= \frac{22}{36} = \boxed{\frac{11}{18}}$$

Your Turn:

Pg. 13 # 4

5

6

7

Homework: • Read Ch 1-2 "Order of Operations"

• Page 14 # 15 to 19, 24, 25.