

BE-1A Tuesday 8-19-08

① Name 4 grouping symbols.

Convert to a fraction:

② 0.02

③ 0.005

④ 0.218

Convert to a decimal:

⑤ $\frac{8}{10}$

⑥ $\frac{9}{1000}$

⑦ $\frac{52}{100}$

• Hand in "last chance late work"

Try this problem - individual work!

$$8 \div 2 \cdot 2 + 4 \cdot 2$$

Did you get 10? 16? Something else?

Convention An agreed upon way of
doing things.

Example: which side of the road
do we drive on in the US?
In the UK?

Who is right?

EVALUATE:

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

If you do the $+$, $-$, $\cdot$, $\div$ 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

$\downarrow$
sequence

$\downarrow$
 $+, -, \cdot, \div$

Rules will get the same answer.

$$4 + 1 \cdot 4 - 3$$

$$4 + 4 - 3$$

$$8$$

$$- 3$$

$$=$$

$$\boxed{5}$$

Correct Answer

A simple $+$, $-$, $\cdot$, $\div$ CALCULATOR
will not, except by accident,
follow the correct Order of Operations
Rules, a scientific calculator will.

You will be provided A simple $+$, $-$, $\cdot$, $\div$
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

$\div$ MAY come
before $\cdot$

$-$ MAY come
before $+$

- Parentheses means ANY grouping symbol such as:

()

[]

{ }

—

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

Let's go back and try

$$4 + 2 \div 2 \cdot 4 - 3 \quad \text{No } \underline{P}, \text{No } \underline{E}$$

$$4 + 1 \cdot 4 - 3$$

$$4 + 4 - 3$$

$$8 - 3$$

$$\boxed{5}$$

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

BUT...

It would be just as correct to write it

$PE(\vec{DM})(\vec{SA})$

EX1
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② $3 + 2 \cdot 3 + 5$
 $3 + 6 + 5$
 $9 + 5 = \boxed{14}$

⑥ $15 \div 3 \cdot 5 - 4^2$
 $15 \div 3 \cdot 5 - 16$
 $\swarrow \searrow$
 $5 \cdot 5 - 16$
 $25 - 16 = \boxed{9}$

EX2
Pg 12

(a)

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

$$2(5) + 3(7)$$

$$10 + 3(7)$$

$$10 + 21 = \boxed{31}$$

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

$$2[5 + (5)^2]$$

$$2[5 + 25]$$

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

EX3
Pg 12

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

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

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

Homework: Pg 13 # 4 to 8