

BE-Algebra 1 | WEDNESDAY 8-19-09

- ① Name the four (4) grouping symbols.
- ② Write the 4-step convention for "order of operations."

EVALUATE:

③ $(8-3) \cdot 3(3+2)$

④ $4[12 \div (6-2)]^2$

⑤
$$\frac{2^5 - 6 \cdot 2}{3^3 - 5 \cdot 3 - 2}$$

• Homework review $\Rightarrow$ 8-18-09 Worksheet

Answers to 8-18-09 Homework Worksheet

1) 26

2) 12

3) 2

4) 32

5) 4

6) 4

7) 22

8) 3

9) 2

10) 4

11) 10

12) 12

1.
SET - collection of things

set
NOTATION - $\{\text{element, element, } \dots\}$

Sets of
Numbers $\dots$ is an ellipsis, "the pattern continues"

$\{1, 2, 3, \dots\}$ NATURAL

$\{0, 1, 2, 3, \dots\}$ Whole $\textcircled{*M}$ Whole
↑
ADDED

Integers $\{\dots -3, -2, -1, 0, 1, 2, 3, \dots\}$
 $\textcircled{Z}$

$\textcircled{Q}$ Fraction
↓
RATIONAL $\left\{ \frac{a}{b} \right\}$ OR $\{\text{All terminating decimals, all repeating decimals}\}$
where a, b any integers and $b \neq 0$

NOT FRACTION
IRRATIONAL $\{\text{All non-repeating infinite decimals}\}$ Ex) $\pi, \sqrt{2}, \sqrt{3}$

Reals $\{\text{RATIONAL, irrational}\}$

Name ALL THE sets of numbers that each number belongs to:

① 4

② -1

③ 0

④ $\frac{2}{3}$

⑤ 0.6

⑥ $\sqrt{4}$

⑦ 8^2

⑧ $-\frac{2}{3}$

⑨ $\sqrt{3}$

$$1 \cdot 1 = 1^2 = 1$$

$$\sqrt{1^2} = \sqrt{1} = 1$$

$$2 \cdot 2 = 2^2 = 4$$

$$\sqrt{2^2} = \sqrt{4} = 2$$

$$3 \cdot 3 = 3^2 = 9$$

$$\sqrt{3^2} = \sqrt{9} = 3$$

$$4^2 = 16$$

$$5^2 = 25$$

$$6^2 = 36$$



These ARE "PERFECT SQUARES",
the $\sqrt{\text{PS}}$ is RATIONAL

$$\sqrt{1} = 1$$

BECAUSE $1 \cdot 1 = 1$

$$\sqrt{2} =$$

WHAT NUMBER TIMES ITSELF = 2?

$\approx 1.414...$

$$\sqrt{3} =$$

WHAT NUMBER TIMES ITSELF = 3?

$\approx 1.732...$

$$\sqrt{4} = 2$$

BECAUSE $2 \cdot 2 = 4$

$$\sqrt{5} =$$

$$\sqrt{6} =$$

$$\sqrt{7} =$$

$$\sqrt{8} =$$

$$\sqrt{9} = 3$$

BECAUSE $3 \cdot 3 = 9$



THE SQUARE ROOTS OF ALL NON PERFECT

SQUARES ARE IRRATIONAL = NON-terminating
INFINITE DECIMALS
(like π).

IN Algebra 1 the only irrational numbers
we will use are π and the non-perfect
square roots

• Review/Summary

• Homework - organize notes
& memorize definitions. FLASH CARDS ???