

BE-Alg-1 Wednesday 8-17-11

Simplify:

① $\frac{1}{7}$ (START AT TOP OF page, leave plenty of Room.)

② Write an algebra expression for "seven more than three times a number x "

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- Have "forms" ready for hand-ins
 - MATH LIKES/DISLIKES & class likes/dislikes
 - Homework review:

① $\frac{3}{4}$ ② $\frac{14}{16}$ ③ $\frac{7}{8}$ ④ $\frac{24}{36}$

⑤ 12 less than 5 times a number x

Compare: 12 less 5 times a number x

 When subtracting, you must know what you start with.

⑥ the product of 5 and y squared

⑦ 4 more than C to the eighth power

Words to Algebra - some common terms:

increased
sum, more $\Rightarrow$ ADD $+$

less $\Rightarrow$ SUBTRACT $-$

is $\Rightarrow$ EQUALS $=$

product $\Rightarrow$ MULTIPLY $\cdot$

"twice" $\Rightarrow$ times 2
or
double

💡 $3 \cdot 4 = 12$

"factories make products"

3, 4 are
"factors" of 12

quotient $\Rightarrow$ DIVIDE $\div$

grouping $\Rightarrow$ $()$ $[]$ $\{ \}$ $\frac{\quad}{\quad}$
parentheses brackets braces fraction bar

Powers $\Rightarrow$ bases and exponents

EX $4^2 = 4 \cdot 4 = 16$

$5^1 = 5$

$5^2 = 5 \cdot 5 = 25$

$5^3 = 5 \cdot 5 \cdot 5 = 125$

5^3
↑
base

LOOK

Exponent $\Rightarrow$ it is smaller and
above and to right of
base.

EX

$(base)^2 = (base)(base)$

$(base)^3 = (base)(base)(base)$

$$(-3)^2 = ?$$

$$(-3)(-3) = \boxed{9}$$

$$-3^2 = ?$$

$$\boxed{-9}$$

(*)d

Coefficient - the number in front of
A variable

(*)e

$3x$

3 is the coefficient
of x .

NEVER x^3

IDENTIFY THE COEFFICIENTS:

① $7x$

② $\frac{1}{2}b$

③ $\frac{c}{4}$

④ x

⑤ 7^2y

(*)m

CASUAL dress: x

Formal dress $1x^1$

↑
coefficient is
understood to be 1

↖
exponent is understood
to be 1

- EVALUATE:
- ① 2^5
 - ② 6^2
 - ③ $\left(\frac{1}{2}\right)^2$
 - ④ $(-5)^2$
 - ⑤ $(-5)^3$

LOOK $(-\text{base})^{\text{ODD}} \Rightarrow \text{ALWAYS NEGATIVE}$

$(-\text{base})^{\text{EVEN}} \Rightarrow \text{ALWAYS POSITIVE}$

$$(-8)^{41} \Rightarrow ?$$

NEGATIVE

$$(-8)^{102} \Rightarrow ?$$

POSITIVE

Decimals to Per Cent $\Rightarrow$ Per "100"

$\uparrow$

2 decimal places

*M DP in baseball? Double Play

D $\rightarrow$ P decimal $\rightarrow$ percent $\Rightarrow$ 2 places to right

EX $\frac{3}{4} = 0.75 \rightarrow 75\%$

D $\leftarrow$ P $\Rightarrow$ % to decimal $\Rightarrow$ 2 places to left.

Common uses for fractions $\rightarrow$ decimals $\rightarrow$ %

- Comparing
- simple probability

↓

(EX) $\frac{4 \text{ student}}{19 \text{ total}}$ ARE left handed

Probability of random student
in class being a lefty?

$$\begin{array}{r} 0.2105 \\ 19 \overline{) 4.0000} \\ \underline{38} \\ 20 \\ \underline{-19} \\ 10 \end{array}$$

and stop here if you only
want nearest whole %,
since $0 < 5$, round
0.210 to 0.21

DP $\Rightarrow$ 21%

- ~7-10% of adults left-handed
- genes or environment?

$\rightarrow$ UK $\Rightarrow$ young ~ 7-10% ? ? with
old ~ 3%

$\rightarrow$ identical twins $\Rightarrow$ one is left-h
other? 7% left-h

Comparing:

Fraction to Percent Example

Number of Students That Turned in Parent Letter and Contact Form Early

<u>Period</u>	<u>Number Early</u>	<u>Total Students</u>	<u>Grade Level</u>	<u>"Moon" Fraction</u>	<u>%</u>
1	9	26	9	$\frac{9}{26} = .346$	35%
2	5	22	9	?	?
3	23	25	11	?	?
4	15	19	9	?	?
5	14	20	12	?	?
7	15	24	9	?	?

Homework: Complete the table, why does changing each fraction to a decimal, then to a percent make it easier to compare classes?
 Which class has the most initiative?
 Which 9th grade class has the most initiative?
 Which 9th grade class is second?

- It time, began to handout books.