

BE-1 AND 1A TUESDAY 8-12-08

Convert to a decimal, then to a per cent:

① $\frac{3}{4}$

② $\frac{1}{7}$

Convert to a decimal:

③ 26%

④ 5.81%

Using mental math, find the products:

⑤ $34 \cdot 10$

⑥ $896 \cdot 100$

⑦ $1.62 \cdot 1000$

1.
Your grade $\Rightarrow$ A "weighted" average.

20% = homework, classwork, projects, etc.

30% = quizzes (short)

40% = exams (longer)

5% = ARE YOU PREPARED FOR CLASS (supplies, homework, etc.)

5% = ARE YOU WORKING IN CLASS

100%

2% = BONUS: ARE YOU IN YOUR SEAT WORKING
WHEN THE BELL RINGS

EX) 5 homeworks, 60%, 70%, 80%, 70%, 90% $\Rightarrow$ Avg. = 74%

5 quizzes, 80%, 90%, 95%, 100%, 90% $\Rightarrow$ Avg = 91%

2 exams, 80%, 90% $\Rightarrow$ Avg = 85%

Assume you HAVE ALL your BPP points = 12%

$(74)(.20) = 14.8$ (out of 20 possible)

$(91)(.30) = 27.3$ (out of 30 possible)

$(85)(.40) = 34.0$ (out of 40 possible)

+ 12.0 (out of 12 possible)

88.1% GRADE = B

• NOTE $\Rightarrow$ GRADE = B if you lose all BPP points
 $\Rightarrow$ ZERO ON HOMEWORK $\Downarrow$ GRADE!

⊛ CONSTANT

A number, the value of a number never changes it always has the same value so it is called a constant

⊛ 4

⊛ 0

⊛ -3.6

⊛ $\frac{1}{2}$

⊛ $0.\overline{3}$

⊛ π

⊛ VARIABLE

A letter used to represent one or more possible number values, since its value may change or vary, it is called a variable.

⊛ x

⊛ E

💡 USE MEANINGFUL VARIABLE NAMES ! ! !

Area of rectangle
is length $\cdot$ width

$A = l \cdot w$ makes sense

$x = y \cdot z$ makes no sense

{A is not the same as a LOOK



$+$, $-$, $\cdot$, $\div$ these are symbols for the 4 basic math operations, so they are called operators.



Algebraic Expression

A math expression with ONE OR MORE NUMBERS AND VARIABLES AND operators

(EX)

$$3x$$

What is the 3 doing to the x ?

$$3 + x$$

$$4x - 3y$$

$$xy$$

What is the x doing to the y ?

$$5x$$

How many x 's are there?

$$x$$

How many x 's are there?

$x = 1x = 1 \cdot x$ The 1 is "understood", it is NOT normally shown

$$3abc \div 4d$$

$$\frac{2x}{y}$$

XXXXXXXX means what?

3.3.3.3.3.3.3.3 means what?

There is a shorthand way of writing these expressions.

$$XXXXXXXX = X^8$$



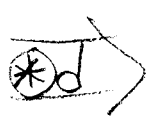
X raised to the 8th power

OR X to the 8th power

the 8 is a superscript, it is SMALLER than the X and is above it and to its right.

The X is called the Base.
The 8 is called the Exponent of X or the power of X.

$$3.3.3.3.3.3.3.3 = 3^8 = 6561$$



BASE ^{EXPONENT}

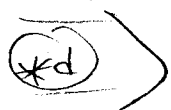
means multiply the base times itself the exponent number of times

$$X = X^1$$

the exponent 1 is there, not usually shown.



X CASUAL DRESS



FORMAL DRESS
↑ COEFFICIENT ↑ EXPONENT
 $1X^1$

$$\textcircled{\text{Ex}} \quad X \cdot X = X^2$$

$$4^2 = 16$$

$$2^3 = 8$$

$$5^2 = 25$$

Are you ready for the most missed problem in Algebra?

$$3^2 = ?$$

$$3^2 = 3 \cdot 3 = 9 \quad \text{NOT } 6 !!$$

$$\textcircled{\text{Ex}} \quad 3 \cdot X \cdot X = 3X^2$$

$$12 \cdot a \cdot a \cdot b \cdot b \cdot b = 12a^2b^3$$

↑ ↑ ↑ ↑ ↑ ↑

factors

↑

product



factories

make

products

Going from words TO Algebraic Expressions

Some common meanings:



<u>WORD</u>	<u>MATH OPERATION +, -, •, or ÷</u>
MORE	+
Sum	+
difference	-
less	-
less than	- from WHAT YOU START WITH
product	•
quotient	÷
of	• <u>EX</u> $\frac{1}{3}$ of $X = \frac{1}{3}X$

EX 8 more than N

$$8 + N$$

$\frac{1}{3}$ of a

$$\frac{1}{3}a$$

the sum of 5 and x

$$5 + x$$

the product of a and b

$$ab$$

y to the 4th power

$$y^4$$

7 less x

$$7 - x$$

7 less than x

$$x - 7$$

x to the y power

$$x^y$$

the product of 4 and
 x to the third power

$$4x^3$$

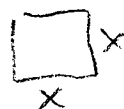
The ARE 2 common NAMES WHEN dealing with exponents.



Squared

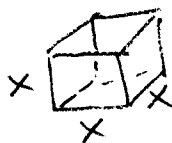
means raised to the second power.

Historical reasons, the Area of a square of side x is $x \cdot x = x^2$ square units



cubed

means raised to the third power. The Volume of a cube of side x is $x \cdot x \cdot x = x^3$ cubic units



Homework: Worksheet 1-1 Page 1 Variables and Expressions
in the "Study Guide and Intervention"
Workbook

Normally, or most often, all your worksheets will end up on the front and you will do all your work on attached loose leaf, but this one you may write on work-sheet.