

- ① DEFINE A MONOMIAL.
- ② WHAT IS THE DEGREE OF EACH MONOMIAL?
- Ⓐ $4x$ Ⓑ $7x^5$ Ⓒ xyz
- Ⓓ $\frac{1}{3}x^6y$ Ⓔ 5^2x Ⓕ x^{-1}

ACT
REV. 2

- ③ WHAT IS THE SURFACE AREA, IN SQUARE CENTIMETERS, OF A 3 CENTIMETER CUBE?

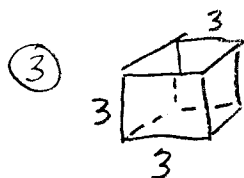
KMS

- ④ THE FORMULA FOR FINDING THE VALUE, A DOLLARS, OF P DOLLARS INVESTED AT $i\%$ INTEREST COMPOUNDED ANNUALLY FOR N YEARS IS $A = P(1 + 0.01i)^N$. WHAT IS AN EXPRESSION FOR P IN TERMS OF i , N , AND A ?

ANS

- ① NUMBER, VARIABLE, OR PRODUCT OF A NUMBER AND ONE VARIABLES. (OR MORE)

- ② Ⓐ 1 Ⓑ 5 Ⓒ 3 Ⓓ 7 Ⓔ 1 Ⓕ NA - NOT A MONOMIAL



EACH SIDE = 9 cm^2

x 6 sides

54 cm^2

④

$$P = \frac{A}{(1 + 0.01i)^N}$$

SOLVE FOR P

POLYNOMIAL: A MONOMIAL or sum of MONOMIALS.
(+, -)

↑
many

(Ex) $5xy^2$

1-term polynomial = MONOMIAL

$3x + 2$

2-term polynomial = BINOMIAL

$7y + 2x + 1$

3-term polynomial = TRINOMIAL

$2x^3 + 4y - 3z + 4$ 4-term polynomial

$3x + 2x + 6$

Careful... NOT a trinomial

$= 5x + 6$

BINOMIAL $\Rightarrow$ combine like terms.

Degree of A
POLYNOMIAL

Find the MONOMIAL with the
highest degree... that is the
degree of the polynomial.

💡 THINK LIKE temperature

(Ex) Find the degrees:

$7x + 2x^3 - 6xyz + 2x^4y + 3x^3$
 MONOMIAL } (1) (3) (3) (5) (3)
 Degree
 Degree of this 5-term poly is 5

You already know How to +, -
POLYNOMIALS:

EX 2

Pg 229

$$(3x^2 - 2x + 3) - (x^2 + 4x - 2)$$

+1 group $\Rightarrow$ "get out
of parentheses
jail" free
+1 (group)

-1 group $\Rightarrow$ must distribute
the -1 to all monomials
in parentheses jail $\Rightarrow$
CHANGE ALL SIGNS
-1 (group)

$$3x^2 - 2x + 3 \quad -x^2 - 4x + 2$$

$$2x^2 - 6x + 5$$

* NORMAL WAY TO WRITE POLYNOMIALS
is in descending order by degree
(highest degree monomial 1st, numbers last)

WHAT IS THE DEGREE OF THIS TRINOMIAL?

2

You also already know how to multiply polynomials. ("Use your exponent rules Luke")...

Examples ③ → ⑤ on page 230

③ $2x(7x^2 - 3x + 5)$

$$14x^3 - 6x^2 + 10x$$

④ $(3y+2)(5y+4) \Rightarrow (3y+2)(5y+4)$

$$\begin{array}{r} 15y^2 + 12y \\ + 10y + 8 \\ \hline 15y^2 + 22y + 8 \end{array}$$

"FOIL" yccccch,
just use arrows!

⑤ $(N^2 + 6N - 2)(N + 4)$

$$\begin{array}{r} N^3 + 4N^2 \\ + 6N^2 + 24N \\ - 2N - 8 \\ \hline N^3 + 10N^2 + 22N - 8 \end{array}$$

• Homework: Pg. 231 # 4-14
232 # 48, 49, 50.