

BE-Geometry I | Monday 8-16-10

① $\left(\frac{2}{3}\right)^3$

② $\left(-\frac{1}{2}\right)^2$

③ $\left(\frac{4}{2}\right)^3$

④ $\frac{2}{3} - \frac{1}{5}$

⑤ $-2 - \frac{2}{5}$

⑥ $\frac{\frac{2}{7}}{\frac{1}{2}}$

Sign Rules:

$\left\{ \begin{array}{l} \text{SSA, KSS} \text{ (EX) } -2 - 2 = -4 \\ \text{DSS, BOW} \text{ (EX) } 2 - 5 = -3 \\ -(-) \Rightarrow + \text{ (EX) } 2 - (-5) = 7 \end{array} \right.$

$\left\{ \begin{array}{l} \text{SSP, DSN} \text{ (EX) } -2(-2) = 4 \end{array} \right.$

$\text{(EX) } \frac{-3}{6} = -\frac{1}{2} \text{ or } \frac{-1}{2}$

Fraction Rules: +, - Common Denominator (EX) $\frac{1}{2} + \frac{1}{3}$

$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

• $\frac{T \cdot T}{B \cdot B}$ (EX) $\frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$

• $\frac{F}{M}$ (EX) $\frac{\frac{1}{2}}{\frac{1}{3}} = \frac{1}{2} \cdot \frac{3}{1} = \frac{3}{2}$

- Forms
- HW Review

Practice - Order of Operations - Homework

Evaluate each expression.

1) $\frac{(-16) + 5 - 1}{6} = \boxed{-2}$

2) $\frac{(-5) + (-1) - (-3)}{-1} = \boxed{3}$

3) $\frac{(2)(2)}{-1} = \boxed{-4}$

4) $-\frac{((6)2)(2)}{4} = \boxed{-6}$

5) $(-3)(6) - (6)(-1) = \boxed{-12}$

6) $2 - 2 + 4 + 2 = \boxed{6}$

7) $\frac{(6 - 4 + 3)(2)}{-2} = \boxed{-5}$

8) $(4)(-1) + 4 - (-3) - \left(-\frac{6}{6}\right) = \boxed{4}$

9) $\left(-1\frac{3}{4}\right) + \frac{1}{3} - \left(3\frac{1}{4} - 1\frac{1}{4}\right) = \boxed{-\frac{41}{12}}$

10) $\frac{1}{2} - \left(\left(-2\frac{1}{3}\right)^3 - 1\frac{1}{2}\right) = \boxed{\frac{397}{27}}$

11) $(8 - 2)(2) - 3 - 3 = \boxed{6}$

12) $(-2) - ((8)(6) - (6 - 5)) = \boxed{-49}$

13) $4 - ((5)(-1) - 4) - (-9) = \boxed{22}$

14) $3 + |6 - 7| + 8 = \boxed{12}$

Evaluate each using the values given.

15) $b + c - bc - b$; use $b = -6$, and $c = 7$

$= \boxed{49}$

16) $|a| + c - (c - a)$; use $a = 1$, and $c = -4$

$= \boxed{2}$

17) $\frac{(3)(x - y + 6)}{6}$; use $x = -8$, and $y = -10$

$= \boxed{4}$

18) $(-4)((y + 6)^2 + x)$; use $x = -7$, and $y = -7$

$= \boxed{24}$

DEFINE: MONOMIAL

POLYNOMIAL

MONOMIAL \Rightarrow Number, variable, or PRODUCT of (times)
A number and variable(s).

(Degree = sum of exponents of variables)
(+ or -)

POLYNOMIAL \Rightarrow A monomial or the sum
of monomials
(Degree = largest monomial degree)

			Degree
(Ex)	2	P (monomial)	0
	x	P (monomial)	1
	xy	P (monomial)	2
	2 + xy	P (Binomial)	2
	$\frac{4}{x}$	NO	N/A
	$2x^2 + 3x + 4$	P (Trinomial)	2
	$5x^5yz + abc + m^2 + 2$	P	7

Like Terms \Rightarrow CAN ONLY COMBINE
(+ or -)
like terms

\Rightarrow SAME VARIABLE

AND • VARIABLES HAVE EXACTLY
THE SAME EXPONENTS!

EX $5x^2 + 3x^3 + 8x^3 = \boxed{5x^2 + 11x^3}$

EX $4x^2y + 3xy^2 + 2x^2y = \boxed{6x^2y + 3xy^2}$

NUMBERS + NUMBERS \Rightarrow SAME DENOMINATOR

VARIABLES + VARIABLES \Rightarrow like term

SAME RADICALS \Rightarrow same term under $\sqrt{\quad}$

EX $3\sqrt{2} + 5\sqrt{3} + 6\sqrt{2}$
 $= \boxed{9\sqrt{2} + 5\sqrt{3}}$

Practice: ADD/SUBTRACT POLYNOMIALS

HW: FINISH WORKSHEET PROBLEMS.

HW Practice

Simplify each expression.

1) $(7x^2 + 4x^3) - (3x^3 + 2x^2)$

2) $(5r + 7r^4) + (2r + 2r^4)$

3) $(3r^2 + 4r) - (5r - 2r^4 - 8r^2)$

4) $(-x^3 - 7x^2) - (2x^3 + 5x^2 + 3x^4)$

5) $(-4n^3 + 5n) - (8n^2 - 2n^3 - 7n)$

6) $(-7 + 5b^4) - (-6b^2 + 7b^4 - 1)$

7) $(-6 - 5n^3 - 6n) - (4n - 7n^4 + 6n^3)$

8) $(4x - 5 + 8x^2) - (-7x^2 + 3 - 2x)$

9) $-5x^3y - 7xy^4 + 2xy^3 - 7xy^3 + 6xy^4 - x^3y$

10) $-3b^2 - 6ab^2 + 6a^2 - 3b^2 - 2ab^2 - a^2$

11) $\left(-\frac{8}{3} + 2v\right) - \left(1 - \frac{7}{2}v\right)$

12) $(-2 + 2k) + \left(\frac{5}{3} + 2k\right)$

13) $\left(-\frac{1}{2} - \frac{13}{7}b^2\right) - \left(\frac{8}{7}b^2 - \frac{7}{5}\right)$

14) $\left(\frac{22}{7}a - \frac{3}{2}a^2\right) - \left(\frac{9}{8}a - \frac{7}{5}a^2\right)$

15) $(-1.7x^2 + 4.24) - (6.6x^2 + 4.7)$

16) $(3.7n^2 - 3.3n) - (-3.9n - 4.62n^2)$