

W-PA Pre-Algebra Week 19 2/8

1.) $\frac{3a^2}{8b^3}$ $a=2$ $b=4$ $\downarrow\downarrow$ PEMDAS

$$\frac{3(2)^2}{8(4)^3} = \frac{3(4)}{8(64)}$$

$$\frac{3(1)}{2(64)} = \boxed{\frac{3}{128}}$$

2.) $\frac{(6a-8)^2}{b^2+4}$ $a=2$ $b=-3$

$$= \frac{(6(2)-8)^2}{(-3)^2+4} = \frac{(12-8)^2}{(-3)^2+4} = \frac{4^2}{9+4} = \boxed{\frac{16}{13}}$$

3.) $\frac{3x^2+4x+12}{y^3}$ $x=-4$ $y=-1$

$$\downarrow$$

$$\frac{3(-4)^2+4(-4)+12}{(-1)^3} = \frac{3(16)+4(-4)+12}{(-1)^3} = \frac{3(16)+4(-4)+12}{-1}$$

$$\frac{48-16+12}{-1}$$

$$\frac{32+12}{-1} = \frac{44}{-1}$$

$$= \boxed{-44}$$

$$0.000893 = 8.93 \times 10^{-4}$$

$$4.) \quad 0.\overbrace{00000}^{5+1 \rightarrow -6}3781 \quad \frac{1}{10^4} = 10^{-4}$$

$$3.781 \times 10^{-6}$$

$$5.) \quad 0.\overbrace{0000}450 \quad 4.50 \times 10^{-5}$$

$$1.43 \times 10^8 = 143000000$$

$$1.\overbrace{43000000}12345678$$

$$2.8911 \times 10^{-3}$$

$$\overbrace{00}2.8911$$

$$0.0028911$$

$$(2 \times 10^4)(6 \times 10^3)$$

$$12 \times 10^4 \times 10^3 = 10^{4+3} = 10^7$$

$$12 \times 10^{7+1} = 1.2 \times 10^8$$

$$(8 \times 10^7)(4 \times 10^3)$$

$$32 \times 10^{7+3} = 10^{10}$$

$$32 \times 10^{10+1}$$

$$3.2 \times 10^{11}$$

$$(8 * 10^5) \div (2 * 10^3)$$

$$4 * 10^{5-3} = 10^2$$

$$4 * 10^2$$

1.) 9.8650000

$$9.865 * 10^7$$

2.) 0.000327

$$3.27 * 10^{-4}$$

3.) $5.37 * 10^{-6}$ $6 \leftarrow 6-1=5$

$$0.00000537$$

4.) $7.1408 * 10^8$ $8-4=4$

$$714080000$$

5.) $(8 * 10^2) * (3 * 10^5)$

$$24 * 10^{2+5}$$

$$2.4 * 10^8$$

6.) $(9 * 10^7) \div (3 * 10^4)$

$$3 * 10^3$$