

9/18 Algebra - Downing
 Homework Check
 Notebook Quiz

Rules of Exponents

Product Property

$$a^m \cdot a^n = a^{m+n}$$

$$a^2 \cdot a^5 = a^7$$

Quotient Property

$$\frac{a^m}{a^n} = a^{m-n}$$

$$\frac{a^2}{a^5} = \frac{1}{a^3}$$

Power of a Power Property

$$(a^m)^n = a^{m \cdot n}$$

$$(a^2)^5 = a^{10}$$

Power of a Product

$$(ab)^n = a^n b^{m \cdot n}$$

$$(2x^3)^3 = 2^3 x^9 = 8x^9$$

Zero Exponent Property

$$a^0 = 1$$

Negative Exponents Property

$$a^{-m} = \frac{1}{a^m}$$

$$\frac{1}{a^{-m}} = a^m \text{ or } a^m$$

$$1) x^2 y^5 x^4 y^8 y^{-3} = \boxed{x^6 y^{10}}$$

$$2) (5x^3 y)(-3x^4 y^3)$$

$$\boxed{-15x^7 y^4}$$

$$5) 45^0 = 1$$

$$6) \frac{x^9 y^{12}}{x^5 y^3} = \boxed{\frac{x^4 y^9}{1}}$$

$$3) (4x^2 y^5)^3 = 4^3 x^6 y^{15} = 64x^6 y^{15}$$

$$4) (2x^3)(6x^5 y^2)^2 = (2x^3)(36x^{10} y^4) = \boxed{72x^{13} y^4}$$

$$7) \frac{16x^3 y^5 z^5}{20x^6 y^{-3} z^2} = \frac{4y^8 z^3}{5x^3}$$

Go over HW - see backside
 New HW - WS #1-10

9/15

Downing - Ken

p. 296 #6-32 evens

6) $4^0 = 1$

8) $(-2)^{-5} = \frac{1}{(-2)^5} = \frac{1}{-32}$

* 10) $\frac{5^{-1}}{-9^0} = \frac{1}{5 \cdot -1} = \frac{1}{-5}$

12) $\frac{(-8)^{-2}}{3^{-4}} = \frac{3^4}{(-8)^2} = \frac{81}{64}$

14) $y^0 = 1$

16) $15c^{-8}d^0 = \frac{15}{c^8}$

* 18) $\frac{10^0 r^{-11} s}{3^2} = \frac{s}{9r^{11}}$

20) $\frac{p^{-8}}{7^{-2} q^{-9}} = \frac{49q^9}{p^8}$

22) $\frac{13x^{-5}y^0}{5^{-3}z^{-10}} = \frac{13 \cdot 5^3 z^{10}}{x^5} = \frac{1625z^{10}}{x^5}$

24) $\frac{(-6)^8}{(-6)^5} = \frac{(-6)^3}{1} = -216$

26) $4^{-5} \cdot 4^5 = \frac{4^5}{4^5} = 1$

28) $(s^{-5})^3 = s^{-15} = \frac{1}{s^{15}}$

* 30) $-7 \cdot (-7)^{-4} = \text{or } (7)^{-3} = \frac{1}{(-7)^3}$

$\frac{-7}{(-7)^4} = \frac{1}{(-7)^3} = -\frac{1}{343}$

32) $\frac{z^8 \cdot z^2}{z^5} = \frac{z^{10}}{z^5} = z^5$