Algebra II

5-1

Laws of Exponents

Laws of Exponents

1) $(x^5)^4 =$ x^{20}

2) $x^5 \cdot x^4 =$ x^9

3) $(-2x^3y^7)^3 =$ $-8x^9y^{21}$

4) $\frac{x^5}{x^3} =$ x^2 $\quad \frac{x \cdot x \cdot x \cdot x \cdot x}{x \cdot x \cdot x}$

5) $\frac{x^4}{x^7} =$ $\frac{1}{x^3}$

6) $(3^2 \cdot 2^4)^3 =$ $3^6 \cdot 2^{12}$ or $2^6 \cdot 8^{12}$

7) $-2^2 =$ -4

8) $(x+y)^2 =$ $(x+y)(x+y) = x^2+2xy+y^2$

Simplify. (pg 213)

1) $\frac{18x^3}{6x} = 3x^2$

17) $\frac{(4r^2s^2)^2}{(4r^2s)^2} = \frac{16r^4s^4}{16r^4s^2} = s^2$

25) $\frac{a^{2m}b^{2m+1}}{(a^2b^2)^m} = \frac{a^{2m}b^{2m+1}}{a^{2m}b^{2m}}$

$\frac{b^{2m+1-2m}}{1} = b^1 = b$

Pg 213

2-30 all