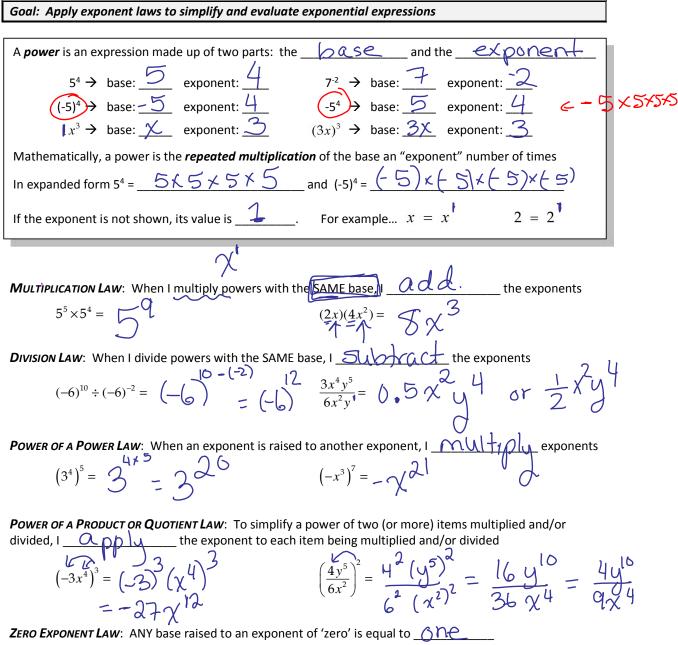
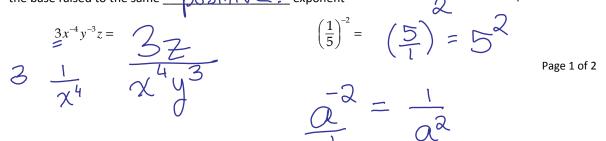
## Lesson 5.7 Laws of Exponents

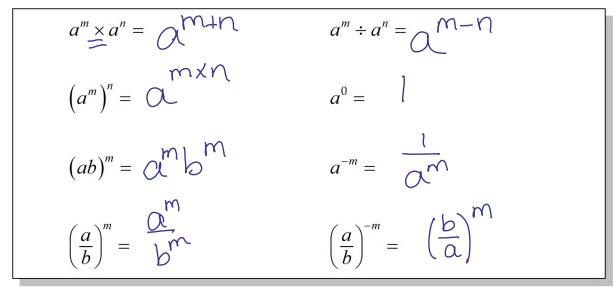


 $(3x^2y^{-6})^0 = ((3^2)^4)^0 = )$ 

**NEGATIVE EXPONENT LAW:** Any base raised to a negative exponent is equal to the <u>reciproca</u> of the base raised to the same <u>postive</u> exponent 2



## SUMMARY OF EXPONENT LAWS



## To SIMPLIFY means to write expressions with POSITIVE EXPONENTS only

## EXAMPLES

First simplify each of the following and then evaluate for 
$$a = 1, b = -2, and c = 3$$
  
a)  $(a^{-2}b)(a^{-3}b^{4})$   
 $= a^{-2}a^{-3}b^{-1}b^{4}$   
 $= a^{-2}a^{-3}b^{-1}b^{-1}$   
 $= a^{-2}a^{-3}b^{-1}b^{-1}$   
 $= a^{-2}a^{-3}b^{-1}b^{-1}$   
 $= a^{-2}b^{-2}a^{-1}b^{-2}c^{-1} = 2^{-2}a^{-1}b^{-2}c^{-1} = 2^{-2}a^{-1}b^{-2}c^{-1} = 2^{-2}a^{-1}b^{-2}c^{-1} = 2^{-2}a^{-1}b^{-2}c^{-1}c^{-1}c^{-2}c^{-1}c^{-2}c^{-1}c^{-2}c^{-1}c^{-2}c$ 

**Practice**: Page 362 #1 – 3 (bef), 4 bce, 5 (bdfh), 6, 7b, 8ac, 10, 13

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