**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**M8-U6: Notes #2 – Exponent Operations: division, negative exponents, and zero exponent**

 **Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Dividing Powers with the Same Bases:**

You can use repeated multiplication to simplify fractions. Expand the numerator and the denominator using repeated multiplication. Then cancel like terms. Note the example below.

1. Complete the following: = =

1. Determine the relationship between the exponents on the two original exponents and the exponent on the final answer.

**Rule:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Using this relationship that you defined above, complete the following

**Try Its: Rewrite each item as an equivalent expression in exponential notation.**

**a)** **** **b)** ****

**c)** **** **d)** ****

**e)** **** **f)** ****

|  |
| --- |
|  |

**g)** **** **h)** ****

Tell whether each statement is correct. Show work to support your answer.

**i)** **** **j)** ****

**k)** **** **l)** ****

**m)**  **n)** 

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| --- |
|  |

**Try Its: Rewrite each item as an equivalent expression in exponential notation. Answers should only have positive exponents.**

**a)** **** **b)** ****

**c)**  **d)** 

**Property of Exponents Summary:**

|  |  |  |
| --- | --- | --- |
| **Exponential Notation** | **Expanded Notation** | **Evaluate** |
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