Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table# \_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_

**10.4A Zero and Negative Exponents\_Classwork**

*Objective: Know and apply the properties of integer exponents to generate equivalent expressions (CCSS: 8.EE.1)*

*HW: (10.4A) p. 432 #5 – 12, 37 – 39 (odd answers on p. A40)*

**Complete the table below.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| QUOTIENT | REPEATED MULTIPLICATION FORM | VALUE AFTER SIMPLIFIED |  | QUOTIENT | QUOTIENT OF POWERS RULE | POWER |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Describe the pattern in the table. Then write a rule for using zero exponents.

Except zero, everything to the zero power equals \_\_\_\_\_\_\_\_\_\_\_\_

a0 = \_\_\_\_ 30 = \_\_\_\_\_

PRACTICE:

|  |  |
| --- | --- |
| 1. Simplify 30 ∙ 34 | 1. Simplify 82 ∙ 80 |
| 1. Simplify (-2)3 ∙ (-2)0 | 1. Simplify |

**Complete the table below.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| QUOTIENT | QUOTIENT OF POWERS RULE | POWER |  | QUOTIENT | REPEATED MULTIPLICATION FORM | VALUE AFTER SIMPLIFIED |
|  |  |  |  |  |  |  | |
|  |  |  |  |  |  |  | |
|  |  |  |  |  |  |  | |
|  |  |  |  |  |  |  | |

Describe the pattern in the table. Then write a rule for using negative exponents.

To make a negative exponent positive, take the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(move numerator to denominator or denominator to numerator)

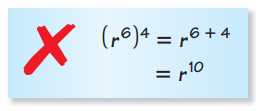
a-n = \_\_\_\_ 3-2 = \_\_\_\_\_

PRACTICE:

|  |  |
| --- | --- |
| 1. Evaluate 3-4 | 1. Evaluate (-5)-3 |
| 1. Evaluate | 1. Evaluate |

(1) Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ERROR ANALYSIS: Read the problem. Describe what the error is and then correct it. Then, give your paper to your partner. Have them read your “error analysis” and decide if a) you found the error and b) corrected it.



(2) Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ERROR ANALYSIS: Read the problem. Describe what the error is and then correct it. Then, give your paper to your partner. Have them read your “error analysis” and decide if a) you found the error and b) corrected it.

