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

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

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

*HW: (10.4B) p. 432 #13 – 17, 20 – 26 all (Copy problem. Show work. Check solutions on p. A40)*

**Warm Up**

|  |  |
| --- | --- |
| 1. Evaluate the expression.

 5-3 ∙ 53  | 1. Evaluate the expression.

 $\frac{1}{5^{7}}∙ \frac{1}{5^{-4}}$ |

EXAMPLES

|  |  |
| --- | --- |
| B.I.M. Video – 10.4 - Example 21) Simplify. If possible, write the expression using only positive exponents.1. -2x0
2. $\frac{4b^{-4}}{b^{7}}$
 | 2) Simplify. If possible, write the expression using only positive exponents.1. 7y-3
2. $\frac{m^{4}n^{-1}}{2m^{-3}}$
 |
| 3) Evaluate the expression 4 · 2-3 + 7 | 4) Simplify. Write the expression using only positive exponents. 5m-8 · 6m6 |

STEPS:

1. Make expression into a fraction (if it is not already)
2. Identify negative exponents
3. Take the reciprocal of negative exponents to make them positive
4. Simplify

ON YOUR OWN p. 431

Simplify. Write the expression using only positive exponents.

|  |  |  |
| --- | --- | --- |
| 7. 8x-2 | 8. b0 · b10 | 9. $\frac{z^{6}}{15z^{9}}$ |

|  |  |
| --- | --- |
| 9b. $\frac{8x^{-4}}{x^{2}}$ | 9c. $\frac{k^{5}}{2k^{-3}}$ |