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

**Lesson 10.3C Quotient of Powers Property\_Classwork**

*Objective: divide powers with the same base; simiplify expressions involving the quotient of powers. CC.SS.EE.1*

*HW: worksheet 10.3C HW*

SIMPLIFY EACH EXPRESSION. WRITE YOUR ANSWER AS A POWER.

1. $\frac{3^{5}}{3^{0}}$ 2. $\frac{\left(-4\right)^{7}}{\left(-4\right)^{3}}$ 3. $\frac{x^{8}}{x^{7}}$

READ EXAMPLE 3 (p. 425)





|  |  |  |
| --- | --- | --- |
| 6.$$\frac{d^{5}}{d}∙\frac{d^{6}}{d^{8}}$$ | 7.$$\frac{5^{9}}{5^{4}}∙\frac{5^{5}}{5^{2}}$$ | 8.$$\frac{9x^{3}}{6}∙\frac{2y^{8}}{2y^{6}}$$ |

**WARM-UP**

SIMPLIFY EACH EXPRESSION. WRITE YOUR ANSWER AS A POWER WITH POSITIVE EXPONENTS

|  |  |  |
| --- | --- | --- |
| 1.$$\frac{7^{5}∙7^{6}}{7}$$ | 2.$$\frac{m^{12}∙m^{2}}{m∙m^{6}}$$ | 3.$$\frac{5^{12}}{5^{6}∙5^{3}}$$ |
| 4.$$\frac{π^{15}}{π^{3}∙π^{9}}$$ | 5.8dd5 | 6.$$\frac{12p^{5}}{4p^{7}}$$ |

EXAMPLE 3 (p. 425).

SIMPLIFY EACH EXPRESSION. WRITE YOUR ANSWER AS A POWER WITH POSITIVE EXPONENTS

|  |  |
| --- | --- |
| $$\frac{a^{10}}{a^{6}} ∙ \frac{a^{7}}{a^{4}}$$ | $$\frac{a^{10}}{a^{6}} ∙ \frac{a^{7}}{a^{4}}$$ |

Additional Example

|  |
| --- |
| $$-\frac{10x^{9}}{18x^{5}} ∙ \frac{y^{4}}{y^{2}}$$ |