Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**THIS HOMEWORK IS DUE BY: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Weekly Homework 3 Mrs. Zunich

\*Before beginning the homework, be sure to fill in our rules for exponenets.

|  |  |
| --- | --- |
| Steps for Product Rule | Steps for Quotient Rule |
| 1. \_\_\_\_\_\_ the base.
2. \_\_\_\_\_\_\_\_ the powers.
3. \_\_\_\_\_\_\_\_\_\_ the coefficients.
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2. \_\_\_\_\_\_\_\_ the powers.
3. \_\_\_\_\_\_\_\_\_\_ the coefficients.
 |

**Directions**: Please show all work to receive full credit. You can use your calculator to answer all questions.

1. Write an equivalent expression for the expressions below.
2. $\frac{-315x^{12}}{5x^{7}}$ b)$(-4x^{-15})(2xy^{27})$

 c)$\frac{25y^{30}}{5y^{7}}$ d)$\left(x^{7}y^{2}z\right)^{2}$

1. Evaluate the following below.

a)$\sqrt[3]{729}$ b) $\sqrt{-576}$

1. Use properties of exponents to simplify the expression.

 $(x^{-3}yz^{14})^{2}(x^{12}z^{-3})$

1. Write the following with ONLY positive powers!
2. $x^{-2}$ b)$ y^{-12}$

 c)$ 2^{-5}$ d)$ 3^{-7}$

1. Simplify the following.
2. $x^{-5}∙x^{5}$ b) $\frac{\left(-12\right)^{34}}{(-12)\^-15}$

**SELF-REFLECTION**

Self-evaluation: On a scale of one to five do you feel you about the topics we covered this week?

 Which problems did you feel were really easy and which problems were challenging. Justify your answer.

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