

Name \_\_\_\_\_

Date \_\_\_\_\_

**Properties of Integer Exponents - Step-by-Step Lesson**1. Simplify  $5^3 \times 5^{-6}$ **Explanation:**

Step 1) First we look to see what is being asked of us.

Step 2) This is a base with a negative exponent. We need to turn it into a positive exponent. We can do that by taking the reciprocal of it.

It would look like this:

$$5^3 \times \frac{1}{5^6}$$

Step 3) Expand the exponents fully.

$$125 \times \frac{1}{15625} = \frac{125}{15625}$$

Step 4) Reduce the fraction. Both the numerator and denominator are divisible by 125.

$$\frac{125}{15625} \div 125 = \frac{1}{125}$$

