

Name _____

Date _____

Properties of Exponents - Step-by-Step Lesson

Simplify. Express your answer using positive exponents.

$$r^{-5} \times r^{-5} \times r^{-2}$$

Explanation:

To multiply powers with the same base, add their exponents. A negative exponent can be written as a positive exponent in the denominator.

$$a^{-n} = \frac{1}{a^n}$$

multiply the r 's, remembering to add the exponents

$$r^{-5} \times r^{-5} \times r^{-2}$$

$$r^{(-5 + -5 + -2)}$$

$$r^{-12}$$

Finally, express your answer using positive exponents.

$$r^{-12}$$

$$\frac{1}{r^{12}}$$

