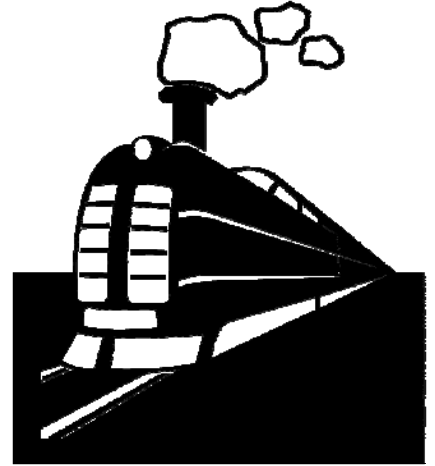


Using the Product Rule of Exponents Step by Step Lesson

Find the products.

$$1) 5^{11} \cdot 5^7 =$$



$$2) 10^{-5} \cdot 10^4 \cdot 10^8 =$$

The Product Rule for Exponents states that for two or exponents that share the same base, the products is equal to their shared base to the sum of their exponents. For example:

$$(x^a)(x^b) = x^{a+b}$$

We can apply this to each problem to find the product:

$$1) 5^{11} \cdot 5^7 = 5^{11+7} = 5^{18}$$

$$2) 10^{-5} \cdot 10^4 \cdot 10^8 = 10^{-5+4+8} = 10^7$$

