Name _____ Date _____

Unit Rates and Ratios of Fractions - Step-by-Step Lesson

Lesson 1 Fractions Problem:

If 1/3 of a gallon of paint covers 1/9 of a gate, then how many gallons of paint are needed to cover the entire gate?

Explanation:

Divide the total amount of paint given (1/3 of a gallon) by the portion of the gate that was covered (1/9).

$$\frac{1}{3} \div \frac{1}{9} =$$

To complete a fractional division problem, we will write 1/9 as an improper fraction. Turn this from a division problem into a multiplication problem by multiplying by the reciprocal.

$$\frac{1}{3} \div \frac{1}{9} = \frac{1}{3} \times \frac{9}{1}$$

Now we will multiply:

$$= \frac{1 \times 9}{3 \times 1} = \frac{9}{3} = 3$$

So the answer is 3 gallons of paint.