

Multiplying and Dividing Rational Expressions - Step-by-Step Lesson

a. Divide. Write your answer in simplest form.

$$\frac{5n + 2}{6n - 4} \div (4n - 2)$$



Explanation:

To divide by a fraction, multiply by its reciprocal.

$$\frac{5n + 2}{6n - 4} \div (4n - 2)$$

$$\frac{5n + 2}{6n - 4} \div \frac{(4n - 2)}{1}$$
 Rewrite the second expression as a fraction.

$$\frac{5n + 2}{6n - 4} \times \frac{1}{4n - 2}$$
 To divide, multiply by the reciprocal

$$\frac{5n + 2}{(6n - 4)(4n - 2)}$$
 Multiply the numerators and multiply the denominators.

The answer is $\frac{5n + 2}{(6n - 4)(4n - 2)}$, which can also be written as

$$\frac{5n + 2}{24n^2 - 28n + 8}$$

