

Answers to Practice Exercises for Chapter 11 – The Four Rules for Rational Numbers

Set A - Question 14

Working

$$\frac{9}{16} \div \frac{3}{8}$$

$$\frac{9}{16} \times \frac{8}{3}$$

$$= \frac{\cancel{9}^3}{\cancel{16}_2} \times \frac{\cancel{8}^2}{\cancel{3}_1}$$

$$= \frac{3}{2}$$

Comment

To divide by $\frac{3}{8}$, multiply by its inverse: $\frac{8}{3}$

Divide out the common factors of 8 and 3

Now multiply the numerators, multiply the denominators.

If you don't divide out the common factors before multiplying, you will get $\frac{72}{48}$. Divide out the common factor of 24 to reduce it to its lowest terms: $\frac{3}{2}$

Note: This example yields the correct answer if you divide the numerators and divide the denominators. This works only because the common factors reduce the divisor to $\frac{1}{1}$. Most of the time, this apparently simpler method of dividing fractions won't work.