

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

### Set A - Question 12

#### Working

$$\begin{aligned} & \frac{2}{3} \times \frac{3}{5} \times \frac{5}{16} \\ = & \frac{\cancel{2}^1}{\cancel{3}_1} \times \frac{\cancel{3}^1}{\cancel{5}_1} \times \frac{\cancel{5}^1}{8 \cdot \cancel{16}_2} \\ = & \frac{1}{8} \end{aligned}$$

#### Comment

There are common factors of 3 and 5 and 2 between the numerators and denominators, so divide them out.

Now multiply the numerators, multiply the denominators.

If you don't divide out the common factors first, it goes like this:

$$\begin{aligned} & \frac{2}{3} \times \frac{3}{5} \times \frac{5}{16} \\ = & \frac{30}{240} \\ = & \frac{1}{8} \end{aligned}$$

Multiply the numerators, multiply the denominators.

Now reduce to lowest terms. The common factor is 30, but you might do it in stages dividing by 10 to get  $\frac{3}{24}$  and then by 3 (or the other way round).