

Answers to Practice Exercises for Chapter 12 – The Four Rules for Mixed Numbers

Set A - Question 14

Working

$$\begin{aligned}
 & 1\frac{1}{8} \times 2\frac{7}{10} \times 1\frac{1}{3} \\
 = & \frac{9}{8} \times \frac{27}{10} \times \frac{4}{3} \\
 = & \frac{93}{82} \times \frac{27}{10} \times \frac{14}{13} \\
 = & \frac{81}{20} \\
 = & 4\frac{1}{20}
 \end{aligned}$$

Comment

Change to improper fractions.

Cancel out common factors of 3 and 4. This can be done several ways – only one possibility is shown here

Multiply the numerators, multiply the denominators.

Change to a mixed number

$$\begin{array}{r}
 27 \\
 \underline{3} \\
 81 \\
 \hline
 2
 \end{array}$$

$$\begin{array}{r}
 4 \\
 20 \overline{)81} \\
 \underline{80} \\
 1
 \end{array}$$

Note 1: if you do not cancel out the common factors, you will get $\frac{972}{240}$ which must then be reduced to its lowest terms by dividing out a common factor of 12 (probably in two steps, dividing by 4 and 3) to get $\frac{81}{20}$. This is not obvious, which is why you should always divide out common factors before multiplying.

Note 2: here are some of the other ways that the cancelling out of common factors can be done.

$$\frac{9}{82} \times \frac{279}{10} \times \frac{14}{13} \quad \text{or} \quad \frac{93}{84} \times \frac{27}{105} \times \frac{124}{13}$$