

Answers to Practice Exercises for Chapter 13 – Decimals

Set A - Question 1i

Changing the denominator method:

This will not work as there is no multiple of 15 that will give a denominator of 10, 100, 1000 or so on. You have to divide the numerator by the denominator as shown below.

Dividing the numerator by the denominator method:

$$\begin{array}{r}
 0.533\dots \\
 15 \overline{) 8.1000\dots} \\
 \underline{75} \\
 54 \\
 \underline{45} \\
 50 \leftarrow \text{Remainders} \\
 \text{start repeating}
 \end{array}$$

You can avoid this long division by dividing 8 by 5 and then dividing the answer by 3, as shown on the right.

$$\begin{array}{r}
 0.5333\dots \\
 3 \overline{) 1.6101010\dots} \\
 \underline{3} \\
 5 \overline{) 8.30} \\
 \phantom{} \phantom{} \phantom{} }
 \end{array}$$

↑
Remainders start repeating

$$\frac{8}{15} = 0.5\dot{3} \quad \text{The dot indicates that the 3 recurs.}$$