

Answers to Practice Exercises for Chapter 13 – Decimals

Set A - Question 1e

Working with the fraction part:

Changing the denominator method: (not recommended)

$$\frac{3}{16} = \frac{3 \times 625}{16 \times 625} = \frac{1875}{10\,000} \quad \text{Multiplying numerator and denominator by 625 gives a fraction in ten-thousandths.}$$

$$= 0.1875 \quad \text{This can then be written as 1875 in the ten-thousandths decimal place value}$$

It is unlikely that you would spot that $16 \times 625 = 10\,000$, so this method isn't very useful.

OR

Dividing the numerator by the denominator method:

$$\begin{array}{r} 0.1875 \\ 16 \overline{) 3.10000} \\ \underline{16} \\ 14 \\ \underline{12} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

You can avoid this long division by dividing 3 by 4 and then dividing the answer by 4 again, as shown on the right.

$$\begin{array}{r} 0.1875 \\ 4 \overline{) 0.7500} \\ \underline{4} \\ 30 \\ \underline{28} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

(You could factorise the divisor in other ways, such as 2×8 .)

So, recombining the integer and fraction parts, $15\frac{3}{16} = 1.1875$