Answers to Practice Exercises for Chapter 13 – Decimals

Set A - Question 1h

Changing the denominator method:

This will not work as there is no multiple of 7 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:

$$7\overline{)2.^{2}0^{6}0^{4}0^{5}0^{1}0^{3}0^{2}0^{6}0^{4}0^{5}0^{1}0^{3}0^{2}0^{6}0^{4}0^{5}0^{1}0^{3}0^{2}0^{6}0^{4}0^{5}0^{1}0^{3}0\ldots}\quad 0.2\,8\,5\,7\,1\,4\,2\,8\,5\,7\,1\,4\,2\,8\,5\,7\,1\,4\ldots$$

↑ At this point, the sequence of remainders repeats itself.

$\frac{2}{7} = 0.\dot{2}85714\dot{}$ The two dots indicate that this is a recurring decimal.