

Answers to Practice Exercises for Chapter 13 - Decimals

Set A - Question 3

This requires a little algebra:

$$\text{Let } x = \dot{6}\dot{3}.$$

Then, multiplying both sides of the equation by 100,

$$100x = 63.\dot{6}\dot{3}$$

Subtracting x from $100x$ on the left side and subtracting $\dot{6}\dot{3}$ from $63.\dot{6}\dot{3}$ on the right,

$$99x = 63 \text{ because all the recurring decimals become zero.}$$

Dividing both sides of this equation by 99 gives:

$$x = \frac{63}{99}$$

Reducing to lowest terms by cancelling a common factor of 9:

$$\frac{63}{99} = \frac{63 \div 9}{99 \div 9} = \frac{7}{11}$$