

Maths

Recurring decimals where one number repeats

Downloadable Resource

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Recurring decimals where one number repeats

1. Solve these equations.

Write your answers as fractions.

a) $10x = 15$

c) $9x = 15$

b) $100x = 33$

d) $99x = 57$

2. Complete the workings to write $0.\dot{4}$ as a fraction.

$$\text{Let } x = 0.\dot{4}$$

$$10x = 4.\dot{4}$$

$$9x = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

3. Write these decimals as fractions.

a) $0.\dot{1}$

c) $3.\dot{2}$

b) $0.\dot{7}$

d) $10.\dot{8}$

4. Spot the error in Sula's working out.

$$\text{Let } x = 0.\dot{6}$$

$$10x = 6.\dot{6}$$

$$9x = 6$$

$$x = \frac{9}{6}$$

$$x = \frac{3}{2}$$



Answers



Recurring decimals where one number repeats

1. Solve these equations.

a) $10x = 15$
 $x = \frac{15}{10}$ or $\frac{3}{2}$

c) $9x = 15$
 $x = \frac{15}{9}$ or $\frac{5}{3}$

b) $100x = 33$
 $x = \frac{33}{100}$

d) $99x = 57$
 $x = \frac{57}{99}$

2. Complete the workings to write $0.\dot{4}$ as a fraction.

$$\begin{aligned}\text{Let } x &= 0.\dot{4} \\ 10x &= 4.\dot{4} \\ 9x &= \underline{\quad 4 \quad} \\ x &= \underline{\quad \quad} \frac{4}{9}\end{aligned}$$

3. Write these decimals as fractions.

a) $0.\dot{1}$ $\frac{1}{9}$

c) $3.\dot{2}$ $\frac{29}{9}$

b) $0.\dot{7}$ $\frac{7}{9}$

d) $10.\dot{8}$ $\frac{98}{9}$

4. Spot the error in Sula's working out.

$$\begin{aligned}x &= 0.\dot{6} \\ 10x &= 6.\dot{6} \\ 9x &= 6 \\ x &= \frac{9}{6} \quad \frac{6}{9} \\ x &= \frac{3}{2}\end{aligned}$$

