GCSE HIGHER · REVISION MAT 3

Recurring decimals

1 Write $0.\dot{6}$ as a fraction in its simplest form.

2 Write $\frac{5}{11}$ as a recurring decimal.

3 Explain why $\frac{7}{20}$ is a terminating decimal.

4 Write $0.\dot{7}\dot{2}$ as a fraction in its simplest form.

5 Prove that $0.\dot{0}\dot{9} = \frac{1}{11}$.

6 Write $0.4\dot{1}$ as a fraction.

7 Show that $0.\dot{2}1\dot{6} = \frac{8}{37}$.

8 Write $1.3\dot{6}$ as an improper fraction.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Recurring decimals

1 $\frac{2}{3}$

2 $0.\dot{4}\dot{5}$

3 $20 = 2 \times 2 \times 5$, which has only 2s and 5s as prime factors.

4 $\frac{72}{99}$

$\frac{8}{11}$

5 $100x - x = 9$

$x = \frac{9}{99}$

$= \frac{1}{11}$

6 $100x - 10x = 41.1\ldots - 4.1\ldots$

$90x = 37$

$\frac{37}{90}$

7 $x = \frac{216}{999}$

$= \frac{8}{37}$

8 $0.\dot{3}\dot{6} = \frac{36}{99} = \frac{4}{11}$

$1\frac{4}{11} = \frac{15}{11}$

Mr&Mrs MATHS