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GCSE MATHS

Number

Edexcel 1MA1 | Subtopic collection Topic 04

Recurring decimals

Higher tier

Past paper question booklet

13	2003-2024	Higher
question groups	available papers	tier

Before you begin

1. Show working and use units where appropriate.
2. Use extra paper if you need more space.
3. Print at actual size (100%) for measurement questions.

Name _____ **Date** _____

Whole questions are retained for context; some parts cover other points. Legacy sources are labelled.

13. Convert the recurring decimal $0.\dot{2}\dot{9}$ to a fraction.

.....

(2)

18. Prove that the recurring decimal $0.\dot{4}\dot{5} = \frac{15}{33}$

blank

Q18

(Total 3 marks)

1. (a) Work out $2\frac{3}{4}+3\frac{2}{3}$

Give your answer as a fraction in its simplest form.

.....

(3)

(b) (i) Which of these fractions can be written as a recurring decimal?

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ $\frac{1}{5}$

.....

(ii) Explain your answer.

.....

.....

.....

(2) **Q1**

(Total 5 marks)

23. Prove that the recurring decimal $0.\dot{3}\dot{6} = \frac{4}{11}$

Q23

(Total 3 marks)

24 Express the recurring decimal $0.2\dot{8}\dot{1}$ as a fraction in its simplest form.

.....

(Total for Question 24 is 3 marks)

14 (a) Write the recurring decimal $0.2\dot{5}$ as a fraction in its simplest form.

.....

(3)

(b) Rationalise the denominator of $\frac{12}{\sqrt{6}}$

Give your answer in its simplest form.

.....

(2)

(Total for Question 14 is 5 marks)

15 Express the recurring decimal $0.7\dot{5}\dot{0}$ as a fraction.

.....

(Total for Question 15 is 3 marks)

15 Express the recurring decimal $0.1\dot{5}$ as a fraction.
Give your answer in its simplest form.

.....

(Total for Question 15 is 3 marks)

20 Prove algebraically that the recurring decimal $0.1\dot{7}\dot{8}$ can be written as the fraction $\frac{59}{330}$

(Total for Question 20 is 3 marks)

Question 10

16 Using algebra, prove that $0.1\dot{3}\dot{6} \times 0.\dot{2}$ is equal in value to $\frac{1}{33}$

(Total for Question 16 is 3 marks)

16 Prove algebraically that $0.2\dot{5}\dot{6}$ can be written as $\frac{127}{495}$

(Total for Question 16 is 3 marks)

14 Using algebra, prove that $1.06\dot{2}$ can be written as $1\frac{14}{225}$

(Total for Question 14 is 3 marks)

18 Show that $0.\dot{1}\dot{5} + 0.2\dot{2}\dot{7}$ can be written in the form $\frac{m}{66}$ where m is an integer.

(Total for Question 18 is 3 marks)