

Fractions, Decimals & Percentages

Question Paper

Course	Edexcel IGCSE Maths
Section	1. Numbers & the Number System
Topic	Fractions, Decimals & Percentages
Difficulty	Hard

Time allowed: 50
Score: /34
Percentage: /100

Question 1

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

[3 marks]

Question 2

$$x = 0.0\dot{4}\dot{5}$$

Prove algebraically that x can be written as $\frac{1}{22}$

[3 marks]

Question 3

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

[3 marks]

Question 4

$$x = 0.4\dot{3}\dot{6}$$

Prove algebraically that x can be written as $\frac{24}{55}$

[3 marks]

Question 5

Prove algebraically that the recurring decimal $0.3\dot{1}\dot{8}$ can be written as $\frac{7}{22}$

[2 marks]

Question 6

Show that the recurring decimal $0.0\dot{1}\dot{5} = \frac{1}{66}$

[2 marks]

Question 7

Use algebra to show that the recurring decimal $0.28\dot{1}\dot{3} = \frac{557}{1980}$

[2 marks]

Question 8

$0.4\dot{x}$ is a recurring decimal.

x is a whole number such that $1 \leq x \leq 9$

Find, in terms of x , the recurring decimal $0.4\dot{x}$ as a fraction.

Give your fraction in its simplest form.

Show clear algebraic working.

[3 marks]

Question 9

Use algebra to show that $0.3\dot{2}\dot{4} = \frac{107}{330}$

[2 marks]

Question 10

At a country park there is a house, a museum and a garden.

The table shows the prices per person to visit the park.

	Price per person
Garden only	Free
House and museum	£12.50
House only	£8
Museum only	£7

One day, 480 people visit the park.

67 visit the garden **only**.

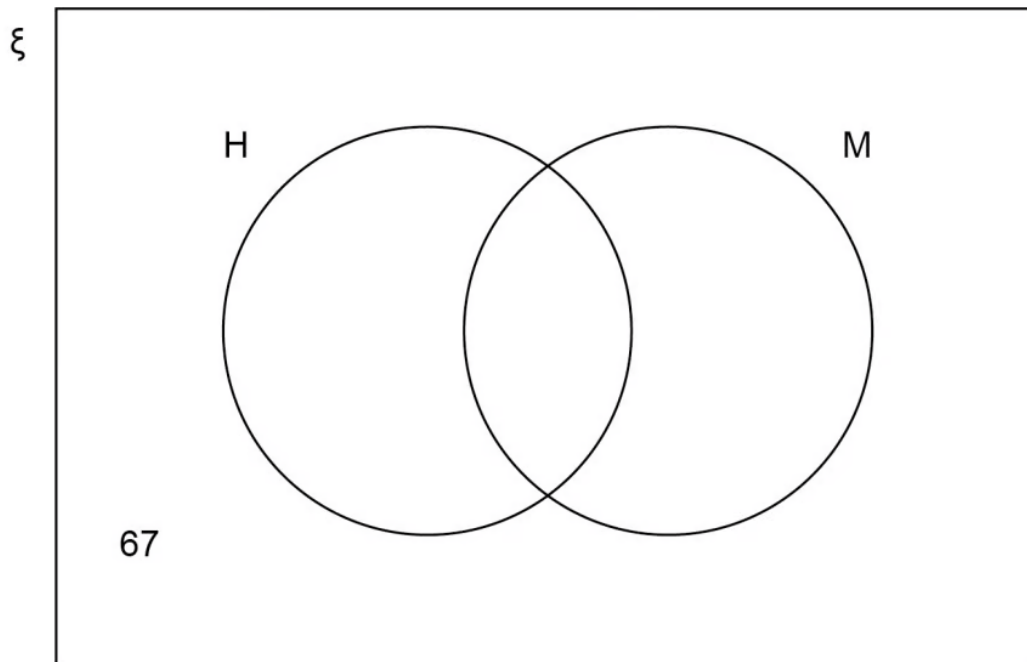
40% visit the house **and** the museum.

$\frac{3}{8}$ visit the house **only**.

The rest visit the museum **only**.

In total, how much do the 480 people pay to visit the park?

You may use the Venn diagram to help you.



[5 marks]

Question 11

Prove algebraically that $2.\dot{7}\dot{5}$ converts to the fraction $\frac{124}{45}$

[3 marks]

Question 12

Write $0.4\dot{1}\dot{6}$ as a fraction in its simplest form.
You must **show full working** in support of your answer.

[3 marks]