FOUNDATION & HIGHER

HIGHER EXTENDS

Name ..... Class .....

N10: Fractions and decimals

Terminating and recurring decimals and their fractions

20 marks · 25 minutes · Non-calculator

1) Write each decimal as a fraction in its simplest form.

(a) 0.35

.....

(1)

(b) 0.125

.....

(1)

[Question 1: 2 marks]

2) Write each fraction as a decimal.

(a) $\frac{3}{8}$

.....

(1)

(b) $\frac{11}{25}$

.....

(1)

[Question 2: 2 marks]

3) Write each fraction as a recurring decimal. Use dot notation.

(a) $\frac{2}{9}$

.....

(1)

(b) $\frac{5}{11}$

.....

(1)

[Question 3: 2 marks]

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4) Show that $0.\dot{4} = \frac{4}{9}$

[Question 4: 2 marks]

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5) Write $0.\dot{3}\dot{6}$ as a fraction in its simplest form.

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[Question 5: 2 marks]

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6) Write $0.2\dot{1}$ as a fraction in its simplest form.

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[Question 6: 3 marks]

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7) Which of these fractions are equal to terminating decimals? $\frac{3}{16}, \frac{2}{7}, \frac{7}{40}, \frac{5}{12}$

.....

[Question 7: 2 marks]

8) Write $0.\dot{1}2\dot{3}$ as a fraction in its simplest form.

.....

[Question 8: 2 marks]

9) Write $1.\dot{6}$ as a mixed number.

.....

[Question 9: 1 marks]

10) Write 0.0625 as a fraction in its simplest form.

.....

[Question 10: 1 marks]

11) Write $0.\dot{8}\dot{1}$ as a fraction in its simplest form.

.....

[Question 11: 1 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	(a) $\frac{7}{20}$ (b) $\frac{1}{8}$	B1 each.
2	(a) 0.375 (b) 0.44	B1 each.
3	(a) $0.\dot{2}$ (b) $0.\dot{4}\dot{5}$	B1 each.
4	Shown	$10x - x = 4$ (M1); $x = \frac{4}{9}$ (A1).
5	$\frac{4}{11}$	$100x - x = 36$ (M1); A1.
6	$\frac{19}{90}$	$100x = 21.1\ldots$ and $10x = 2.1\ldots$ (M1); $90x = 19$ (M1); A1.
7	$\frac{3}{16}$ and $\frac{7}{40}$	B2 (B1 for one correct and none wrong).
8	$\frac{41}{333}$	$\frac{123}{999}$ (M1); A1.
9	$1\frac{2}{3}$	B1.
10	$\frac{1}{16}$	B1.
11	$\frac{9}{11}$	B1.