
GCSE Mathematics

Recurring Decimals to Fractions Practice

Mark Scheme - Higher, Grade 7-8

M = method mark, A = accuracy mark (dependent on the preceding M mark), B = independent mark.

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Edexcel-style questions

Q1 Grade 7 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.\dot{7}$, $10x = 7.\dot{7}$	M1
(a)	$9x = 7$, $x = \frac{7}{9}$	A1

Q2 Grade 7 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.\dot{1}\dot{8}$, $100x = 18.\dot{1}\dot{8}$	M1
(a)	$99x = 18$, $x = \frac{18}{99} = \frac{2}{11}$	A1

Q3 Grade 8 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.1\dot{6}$, $10x = 1.\dot{6}$, $100x = 16.\dot{6}$	M1
(a)	$90x = 15$, $x = \frac{15}{90} = \frac{1}{6}$	A1

Q4 Grade 7 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 2.\dot{3}$, $10x = 23.\dot{3}$	M1
(a)	$9x = 21$, $x = \frac{21}{9} = \frac{7}{3}$	A1

Q5 Grade 8 Edexcel style

Total: 3

Part	Mark scheme	Marks
(a)	$x = 0.\dot{3}\dot{6}$, $100x = 36.\dot{3}\dot{6}$	M1
(a)	$100x - x = 36$, $99x = 36$	M1
(a)	$x = \frac{36}{99} = \frac{4}{11}$, as required	A1

AQA-style questions

Q6 Grade 7 AQA style**Total: 2**

Part	Mark scheme	Marks
(a)	$x = 0.\dot{4}$, $10x = 4.\dot{4}$	M1
(a)	$9x = 4$, $x = \frac{4}{9}$	A1

Q7 Grade 7 AQA style**Total: 2**

Part	Mark scheme	Marks
(a)	$x = 0.\dot{2}\dot{7}$, $100x = 27.\dot{2}\dot{7}$	M1
(a)	$99x = 27$, $x = \frac{27}{99} = \frac{3}{11}$	A1

Q8 Grade 8 AQA style**Total: 2**

Part	Mark scheme	Marks
(a)	$x = 0.58\dot{3}$, $100x = 58.\dot{3}$, $1000x = 583.\dot{3}$	M1
(a)	$900x = 525$, $x = \frac{525}{900} = \frac{7}{12}$	A1

Q9 Grade 7 AQA style**Total: 2**

Part	Mark scheme	Marks
(a)	$x = 3.\dot{6}$, $10x = 36.\dot{6}$	M1
(a)	$9x = 33$, $x = \frac{33}{9} = \frac{11}{3}$	A1

Q10 Grade 8 AQA style**Total: 3**

Part	Mark scheme	Marks
(a)	$x = 0.\dot{4}\dot{5}$, $100x = 45.\dot{4}\dot{5}$	M1
(a)	$100x - x = 45$, $99x = 45$	M1
(a)	$x = \frac{45}{99} = \frac{5}{11}$, as required	A1

OCR-style questions

Q11 Grade 7 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.\dot{5}$, $10x = 5.\dot{5}$	M1
(a)	$9x = 5$, $x = \frac{5}{9}$	A1

Q12 Grade 7 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.\dot{3}\dot{6}$, $100x = 36.\dot{3}\dot{6}$	M1
(a)	$99x = 36$, $x = \frac{36}{99} = \frac{4}{11}$	A1

Q13 Grade 8 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.2\dot{3}$, $10x = 2.\dot{3}$, $100x = 23.\dot{3}$	M1
(a)	$90x = 21$, $x = \frac{21}{90} = \frac{7}{30}$	A1

Q14 Grade 8 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 1.\dot{2}\dot{7}$, $100x = 127.\dot{2}\dot{7}$	M1
(a)	$99x = 126$, $x = \frac{126}{99} = \frac{14}{11}$	A1

Q15 Grade 8 OCR style

Total: 3

Part	Mark scheme	Marks
(a)	$x = 0.\dot{5}$, $10x = 5.\dot{5}$	M1
(a)	$10x - x = 5$, $9x = 5$	M1
(a)	$x = \frac{5}{9}$, as required	A1

Teachably-style questions

Q16 Grade 7 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.\dot{2}$, $10x = 2.\dot{2}$	M1
(a)	$9x = 2$, $x = \frac{2}{9}$	A1

Q17 Grade 7 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.\dot{4}\dot{5}$, $100x = 45.\dot{4}\dot{5}$	M1
(a)	$99x = 45$, $x = \frac{45}{99} = \frac{5}{11}$	A1

Q18 Grade 8 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 0.41\dot{6}$, $100x = 41.\dot{6}$, $1000x = 416.\dot{6}$	M1
(a)	$900x = 375$, $x = \frac{375}{900} = \frac{5}{12}$	A1

Q19 Grade 7 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	$x = 4.\dot{5}$, $10x = 45.\dot{5}$	M1
(a)	$9x = 41$, $x = \frac{41}{9}$	A1

Q20 Grade 8 Teachably style

Total: 3

Part	Mark scheme	Marks
(a)	$x = 0.\dot{2}\dot{7}$, $100x = 27.\dot{2}\dot{7}$	M1
(a)	$100x - x = 27$, $99x = 27$	M1
(a)	$x = \frac{27}{99} = \frac{3}{11}$, as required	A1

END OF PAPER

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