
GCSE Mathematics

Simplifying Ratios

Mark Scheme - Foundation Tier | Grades 3-4

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

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Edexcel-style questions

Q1 Grade 3 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	HCF of 12 and 18 is 6	M1
(a)	$12:18 = 2:3$	A1

Q2 Grade 3 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	HCF of 6, 9 and 15 is 3	M1
(a)	$6:9:15 = 2:3:5$	A1

Q3 Grade 4 Edexcel style

Total: 3

Part	Mark scheme	Marks
(a)	1 m = 100 cm, so the ratio is 40:100	M1
(a)	HCF of 40 and 100 is 20	M1
(a)	$40 \text{ cm} : 1 \text{ m} = 2:5$	A1

Q4 Grade 4 Edexcel style

Total: 3

Part	Mark scheme	Marks
(a)	$0.4:1.6 = 4:16 (\times 10)$	M1
(a)	HCF of 4 and 16 is 4	M1
(a)	$0.4:1.6 = 1:4$	A1

Q5 Grade 4 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	divide both parts by 4	M1
(a)	$4:24 = 1:6$	A1

AQA-style questions

Q6 Grade 3 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	HCF of 15 and 25 is 5	M1
(a)	$15:25 = 3:5$	A1

Q7 Grade 3 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	HCF of 12, 16 and 20 is 4	M1
(a)	$12:16:20 = 3:4:5$	A1

Q8 Grade 4 AQA style

Total: 3

Part	Mark scheme	Marks
(a)	2 kg = 2000 g, so the ratio is 250:2000	M1
(a)	HCF of 250 and 2000 is 250	M1
(a)	$250 \text{ g} : 2 \text{ kg} = 1:8$	A1

Q9 Grade 4 AQA style

Total: 3

Part	Mark scheme	Marks
(a)	$0.6:1.5 = 6:15 (\times 10)$	M1
(a)	HCF of 6 and 15 is 3	M1
(a)	$0.6:1.5 = 2:5$	A1

Q10 Grade 4 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	divide both parts by 6	M1
(a)	$15:6 = 2.5:1$	A1

OCR-style questions

Q11 Grade 3 OCR style**Total: 2**

Part	Mark scheme	Marks
(a)	HCF of 20 and 35 is 5	M1
(a)	20:35 = 4:7	A1

Q12 Grade 3 OCR style**Total: 2**

Part	Mark scheme	Marks
(a)	HCF of 9, 12 and 21 is 3	M1
(a)	9:12:21 = 3:4:7	A1

Q13 Grade 4 OCR style**Total: 3**

Part	Mark scheme	Marks
(a)	2 hours = 120 minutes, so the ratio is 45:120	M1
(a)	HCF of 45 and 120 is 15	M1
(a)	45 minutes : 2 hours = 3:8	A1

Q14 Grade 4 OCR style**Total: 3**

Part	Mark scheme	Marks
(a)	$\frac{1}{2} : \frac{1}{3} = 3:2$ ($\times 6$)	M1
(a)	HCF of 3 and 2 is 1, so already in simplest form	M1
(a)	$\frac{1}{2} : \frac{1}{3} = 3:2$	A1

Q15 Grade 4 OCR style**Total: 2**

Part	Mark scheme	Marks
(a)	divide both parts by 5	M1
(a)	5:40 = 1:8	A1

Teachably-style questions

Q16 Grade 3 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	HCF of 18 and 45 is 9	M1
(a)	$18:45 = 2:5$	A1

Q17 Grade 3 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	HCF of 12, 15 and 18 is 3	M1
(a)	$12:15:18 = 4:5:6$	A1

Q18 Grade 4 Teachably style

Total: 3

Part	Mark scheme	Marks
(a)	3 litres = 3000 ml, so the ratio is 600:3000	M1
(a)	HCF of 600 and 3000 is 600	M1
(a)	$600 \text{ ml} : 3 \text{ litres} = 1:5$	A1

Q19 Grade 4 Teachably style

Total: 3

Part	Mark scheme	Marks
(a)	$\frac{3}{4} : \frac{1}{8} = 6:1 (\times 8)$	M1
(a)	HCF of 6 and 1 is 1, so already in simplest form	M1
(a)	$\frac{3}{4} : \frac{1}{8} = 6:1$	A1

Q20 Grade 4 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	divide both parts by 4	M1
(a)	$18:4 = 4.5:1$	A1

END OF PAPER

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