
GCSE Mathematics

Direct Proportion

Mark Scheme - Grades 4-6

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

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Edexcel-style questions

Q1 Grade 4 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	1 pen = $\text{£}4.80 \div 8 = \text{£}0.60$	M1
(a)	5 pens = $5 \times \text{£}0.60 = \text{£}3.00$	A1

Q2 Grade 4 Edexcel style

Total: 2

Part	Mark scheme	Marks
(a)	1 person needs $300 \div 4 = 75$ g	M1
(a)	10 people need $10 \times 75 = 750$ g	A1

Q3 Grade 5 Edexcel style

Total: 3

Part	Mark scheme	Marks
(a)	$\$1 = \text{£}1 \div 1.35$	M1
(a)	$\$54 = 54 \div 1.35$	M1
(a)	$\$54 = \text{£}40$	A1

Q4 Grade 6 Edexcel style

Total: 3

Part	Mark scheme	Marks
(a)	$k = 20 \div 5 = 4$	M1
(a)	$y = 4x$, so $y = 4 \times 8$	M1
(a)	$y = 32$	A1

Q5 Grade 6 Edexcel style

Total: 4

Part	Mark scheme	Marks
(a)	$k = 45 \div 3 = 15$	M1
(a)	$C = 15h$	M1
(a)	$C = 15 \times 7$	M1
(a)	$C = \text{£}105$	A1

AQA-style questions

Q6 Grade 4 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	1 book = $\pounds 27 \div 6 = \pounds 4.50$	M1
(a)	4 books = $4 \times \pounds 4.50 = \pounds 18$	A1

Q7 Grade 4 AQA style

Total: 2

Part	Mark scheme	Marks
(a)	1 person needs $240 \div 6 = 40$ g	M1
(a)	9 people need $9 \times 40 = 360$ g	A1

Q8 Grade 5 AQA style

Total: 3

Part	Mark scheme	Marks
(a)	1 m = $\pounds 15.75 \div 9 = \pounds 1.75$	M1
(a)	12 m = $12 \times \pounds 1.75$	M1
(a)	12 m = $\pounds 21$	A1

Q9 Grade 6 AQA style

Total: 3

Part	Mark scheme	Marks
(a)	$k = 15 \div 6 = 2.5$	M1
(a)	$y = 2.5x$, so $y = 2.5 \times 10$	M1
(a)	$y = 25$	A1

Q10 Grade 6 AQA style

Total: 4

Part	Mark scheme	Marks
(a)	$k = 10 \div 4 = 2.5$	M1
(a)	$d = 2.5m$	M1
(a)	$d = 2.5 \times 6.5$	M1
(a)	$d = 16.25$ cm	A1

OCR-style questions

Q11 Grade 4 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	$1 \text{ kg} = £6.25 \div 5 = £1.25$	M1
(a)	$8 \text{ kg} = 8 \times £1.25 = £10$	A1

Q12 Grade 4 OCR style

Total: 2

Part	Mark scheme	Marks
(a)	$1 \text{ person needs } 750 \div 5 = 150 \text{ ml}$	M1
(a)	$8 \text{ people need } 8 \times 150 = 1200 \text{ ml}$	A1

Q13 Grade 5 OCR style

Total: 3

Part	Mark scheme	Marks
(a)	$1 \text{ litre} = 165 \div 15 = 11 \text{ miles}$	M1
(a)	$22 \text{ litres} = 22 \times 11$	M1
(a)	$22 \text{ litres} = 242 \text{ miles}$	A1

Q14 Grade 6 OCR style

Total: 3

Part	Mark scheme	Marks
(a)	$k = 20 \div 8 = 2.5$	M1
(a)	$p = 2.5q$, so $p = 2.5 \times 14$	M1
(a)	$p = 35$	A1

Q15 Grade 6 OCR style

Total: 4

Part	Mark scheme	Marks
(a)	$k = 21 \div 12 = 1.75$	M1
(a)	$C = 1.75d$	M1
(a)	$C = 1.75 \times 20$	M1
(a)	$C = £35$	A1

Teachably-style questions

Q16 Grade 4 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	1 ticket = $\pounds 54 \div 12 = \pounds 4.50$	M1
(a)	7 tickets = $7 \times \pounds 4.50 = \pounds 31.50$	A1

Q17 Grade 4 Teachably style

Total: 2

Part	Mark scheme	Marks
(a)	1 person needs $180 \div 3 = 60$ g	M1
(a)	7 people need $7 \times 60 = 420$ g	A1

Q18 Grade 5 Teachably style

Total: 3

Part	Mark scheme	Marks
(a)	1 book = $4.5 \div 15 = 0.3$ kg	M1
(a)	22 books = 22×0.3	M1
(a)	22 books = 6.6 kg	A1

Q19 Grade 6 Teachably style

Total: 3

Part	Mark scheme	Marks
(a)	$k = 30 \div 4 = 7.5$	M1
(a)	$y = 7.5x$, so $45 = 7.5x$	M1
(a)	$x = 6$	A1

Q20 Grade 6 Teachably style

Total: 4

Part	Mark scheme	Marks
(a)	$k = 12.5 \div 5 = 2.5$	M1
(a)	$E = 2.5t$, so $30 = 2.5t$	M1
(a)	$t = 30 \div 2.5$	M1
(a)	$t = 12$ hours	A1

END OF PAPER

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