



Mathematics

Paper 3

(Calculator)

Foundation Tier

Mark Scheme

AQA GCSE

SET 3

Question	Working	Answer	Notes														
Q1	$\frac{35}{100} = \frac{7}{20}$	$\frac{7}{20}$	A1 cao														
Q2	$24 \div 4 = 6$	6	A1 cao														
Q3	$1 \times 18, 2 \times 9, 3 \times 6$	1, 2, 3, 6, 9, 18	A1 cao														
Q4		11:35am	A1 cao														
Q5a		Cuboid	B1 cao														
Q5b		8	A1 cao														
Q6		$\frac{4}{9}$	A1 cao														
Q7	<table><tr><th>Category A</th><th>Category B</th></tr><tr><td>B</td><td>M</td></tr><tr><td>B</td><td>P</td></tr><tr><td>B</td><td>S</td></tr><tr><td>C</td><td>M</td></tr><tr><td>C</td><td>P</td></tr><tr><td>C</td><td>S</td></tr></table>	Category A	Category B	B	M	B	P	B	S	C	M	C	P	C	S		M1 At least 4 correct combinations A1 Exactly 6 correct combinations (no repeats)
Category A	Category B																
B	M																
B	P																
B	S																
C	M																
C	P																
C	S																
Q8	$35 + 3 \times 4.99 = \text{£}49.97$ $3 \times 20 = \text{£}60$ $60 - 49.97 = \text{£}10.03$	£10.03	M1 $35 + 3 \times 4.99$ (= £49.97) or 3×20 (= 60) seen M1 subtracts their ‘49.97’ A1 cao														

Question	Working	Answer	Notes
Q9	$25\% \text{ of } 50 = 50 \div 4 = 12.5$	12.5 litres	M1 $\frac{1}{4}$ or 25% seen M1 Attempt to find 25% of 50 A1 cao
Q10a		25	A1 cao
Q10b		$\frac{1}{3}$	A1 cao
Q11	$6 \times 12 + 5 \times 18 = 162$ $312 - 162 = 150$ $150 \div 25 = 6$	6	M1 $6 \times 12 + 5 \times 18 (= 162)$ or $312 - 162 (= 150)$ M1 $150 \div 25 (= 6)$ A1 cao
Q12a		$2p + 5$	A1 cao
Q12b		Any correct pair of values	M1A1 Any correct pair of values
Q13	$14:18 = 7:9$	7:9	M1 14:18 A1 cao
Q14a	$12 - 5 = 7, 8 - 5 = 3$ $12 + 8 + 5 + 3 + 7 + 5 = 40$	40cm	M1 7cm and 3cm seen or implied A1 cao
Q14b	$x + 7 + 2x + 5 + 2x - 2 = 5x + 10$	$5x + 10$	M1 Attempt to add all three sides A1 cao
Q15a		$\frac{7}{9}$	B1 cao

Question	Working	Answer	Notes
Q15b	$\frac{5}{9} = 30$ $\frac{1}{9} = 30 \div 5 = 6$ $\frac{9}{9} = 6 \times 9 = 54$	£54	M1 $\frac{5}{9} = 30$ oe M1 $30 \div 5$ A1 cao
Q16	$12F = PQ$ $P = \frac{12F}{Q}$	$P = \frac{12F}{Q}$	M1 Multiply by 12 A1 cao
Q17	$30 \div 12 = 2.5$ $45 \div 2.5 = 18$	18cm	M1 $30 \div 12 (= 2.5)$ or $45 \div 2.5 (= 18)$ seen A1 cao
Q18	$100 \times 100 = 10000$	10000cm^2	A1 cao
Q19a		4700	A1 cao
Q19b		0.006	A1 cao
Q19c		$5.25 \leq n < 5.35$	A1 One bound correct A1 cao
Q20		Angles <i>b</i> and <i>d</i> are alternate angles Angles <i>a</i> and <i>c</i> are corresponding angles	B1 First sentence correct B1 Second sentence correct
Q21a	50th/51st values lie in $40 < a \leq 60$	$40 < a \leq 60$	A1 cao

Question	Working	Answer	Notes
Q21b		*Plotted points at upper bounds of intervals *Joined the points in the incorrect order	B1 First correct mistake B1 Second correct mistake
Q22		Rotation, 90° anti clockwise, about $(-1, 0)$	B1 Rotation B1 90° anti clockwise B1 about $(-1, 0)$
Q23a	$8 + 3 \times 10 + 5 \times 12 + 2 \times 14 + 3 \times 16 +$ $2 \times 18 = 210$ $210 \div 16 = 13.125$	13.125	M1 Adds all values and divides by 16 A1 cao
Q23b		*No clothes size 13.125 *Doesn't give us useful information about actual sizes of clothes sold	B1 A relevant statement
Q23c		Mode - it gives us information about the most common clothes size - useful for stock	B1 Mode B1 A relevant statement
Q24	$Q: (\frac{0+12}{2}, \frac{10+2}{2}) = (6, 6)$ $P - Q$: along 6, up 3 $Q - R$: along 12, up 6 $R: (18, 12)$	$(18, 12)$	M1 Point Q correct A1 x or y coordinate of R correct A1 cao
Q25a	$(5m + 4) - (m + 2) = 4m + 2$ $4m + 2 = 12$ $4m = 10$ $m = 2.5$	$m = 2.5$	M1 $4m + 2$ or $4m = 10$ seen A1 cao

Question	Working	Answer	Notes
Q25b	$9m + 6 = 9 \times 2.5 + 6 = 28.5$	28.5	A1 cao
Q26	$2000 \times 1.04^3 = £2249.73$ Or After 1 year: $2000 + 80 = 2080$ After 2 years: $2080 + 83.2 = 2163.20$ After 3 years: $2163.20 + 86.53 = 2249.73$	£2249.73	M1 1.04 seen or £2080 after one year M1 1.04^3 seen or attempt to find amount in account after 3 years using a compound method A1 cao
Q27	1, 2, 3, 4, 6, 8, 12, 16, 24, 48 1, 2, 4, 8, 16, 32, 64	16	M1 Correctly lists at least 4 factors of 48 and 64 or draws prime factor trees for 48 and 64 A1 cao
Q28a	$D = S \times T$ $D = 30 \times \frac{5}{60} = 2.5 \text{ miles}$	2.5 miles	M1 $3 \times \frac{5}{60} (= 2.5)$ oe A1 cao
Q28b	$T = \frac{D}{S}$ $T = \frac{2.5}{20} = \frac{1}{8} \text{ hour}$ $\frac{1}{8} \times 60 = 7.5 \text{ minutes}$ It will take 2.5 minutes longer	No - it will take 2.5 minutes longer	M1 $2.5 \div 20 (= \frac{1}{8})$ oe A1 Correct conclusion following correct working

Question	Working	Answer	Notes
Q29	$8a + 6b = 58$ $9a + 6b = 61.5$ $a = 3.5$ $4 \times 3.5 + 3b = 29$ $14 + 3b = 29$ $3b = 15$ $b = 5$	$a = 3.5$ $b = 5$	M1 $8a + 6b = 58$ $9a + 6b = 61.5$ Oe with common coefficients of a or b M1 One equation subtracted from the other resulting in an equation in one variable A1 $a = 3.5$ or $b = 5$ A1 $a = 3.5$ and $b = 5$
Q30a	<p>Spinner 1</p> <p>Spinner 2</p> <p>1/3 Lands on 1</p> <p>2/3 Doesn't land on 1</p> <p>1/4 Lands on 1</p> <p>3/4 Doesn't land on 1</p> <p>1/4 Lands on 1</p> <p>3/4 Doesn't land on 1</p>		M1 At least two values correct A1 Fully correct diagram
Q30b	$\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$	$\frac{1}{12}$	M1 <i>ft</i> Multiplies their ' $\frac{1}{3}$ ' and their ' $\frac{1}{4}$ ', A1 cao
Q31	$88\% = 8360$ $1\% = 8360 \div 88 = 95$ $100\% = 95 \times 100 = \pounds 9500$	$\pounds 9500$	M1 $88\% = 8360$ seen or implied A1 cao

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