



THIRD SPACE
LEARNING

Mathematics

Paper 1

(Non-Calculator)

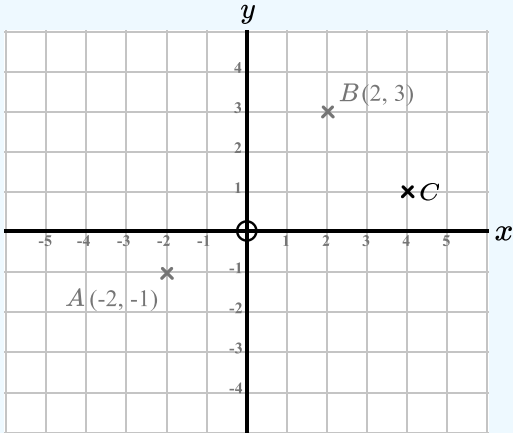
Foundation Tier

Mark Scheme

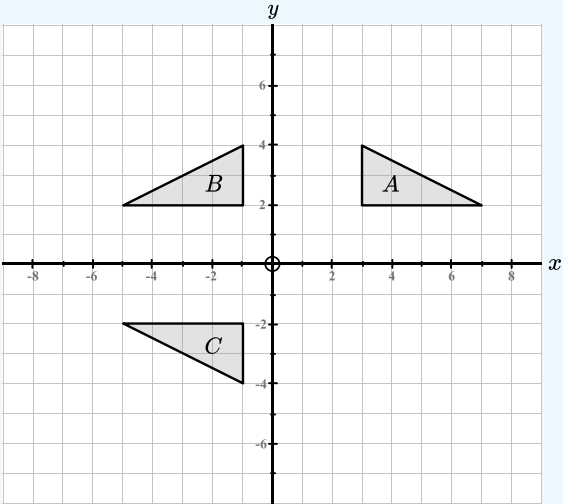
AQA GCSE

SET 2

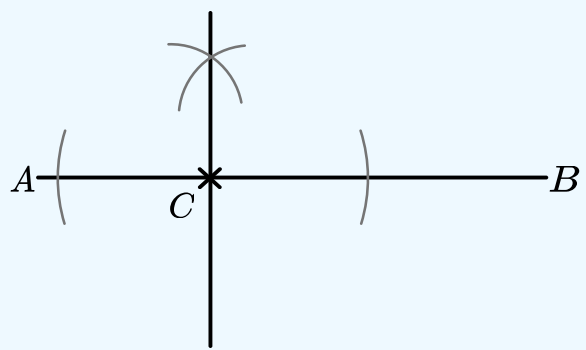
Question	Working	Answer	Notes
Q1		$\frac{4}{100}$	B1 cao
Q2		-10	B1 cao
Q3		Scalene	B1 cao
Q4		4 hours	B1 cao
Q5		1.8	A1 cao
Q6a	$4 + 5 + 2 + 8 = 19$	19	M1 Any three of 4, 5, 2 and 8 seen and attempt to add A1 cao
Q6b		Blue	B1 cao
Q7	$2.80 + 2 \times 0.45 = \text{£}3.70$ $5 - 3.70 = \text{£}1.30$ The biggest she can buy is 2 pints	2 pints	M1 Attempt at $2.80 + 2 \times 0.45$ M1 <i>ft</i> Subtract from £5 A1 Correct answer following correct working
Q8a		$10a$	A1 cao
Q8b		$8b + 20$	A1 cao
Q9	$60 \div 6 = 10$ men $60 \div 10 \times 3 = 18$ women $60 - 10 - 18 = 32$	32	M1 10 men or 18 women seen M1 <i>ft</i> Subtract from 60 A1 cao

Question	Working	Answer	Notes
Q10a			B1 cao
Q10b		(0, 1)	A1 cao
Q11a		$\frac{2}{7}$	A1 cao
Q11b	$10 \div 2 = 5$ $5 \times 5 = 25$	25	M1 $10 \div 2$ or other suitable first step A1 cao
Q12	EG. $\begin{array}{r} 35 \\ 27 \times \\ \hline 245 \\ 700 + \\ \hline 945 \end{array}$	945	M1 Suitable method attempted with some success (e.g. grid method, long multiplication) A1 cao
Q13		400×1000	B1

Question	Working	Answer	Notes																				
Q14	$24 - 6 = 18$ $18 \div 2 = 9$ $6:9 = 2:3$	2:3	M1 $24 - 6$ M1 Length of AB = $9cm$ A1 Correct, simplified ratio																				
Q15	$40\% \text{ of } 40 = 16$ $\frac{3}{8} \text{ of } 40 = 15$ <table border="1"><thead><tr><th></th><th>Cat</th><th>Dog</th><th>Rabbit</th><th>Total</th></tr></thead><tbody><tr><td>Male friends</td><td>8</td><td>11</td><td>3</td><td>22</td></tr><tr><td>Female friends</td><td>7</td><td>5</td><td>6</td><td>18</td></tr><tr><td>Total</td><td>15</td><td>16</td><td>9</td><td>40</td></tr></tbody></table>		Cat	Dog	Rabbit	Total	Male friends	8	11	3	22	Female friends	7	5	6	18	Total	15	16	9	40		M1 Correct values for cat and dog totals M1 At least 4 values correct A1 All values correct
	Cat	Dog	Rabbit	Total																			
Male friends	8	11	3	22																			
Female friends	7	5	6	18																			
Total	15	16	9	40																			
Q16	$\frac{200 \times 90}{50} = \frac{18000}{50}$ $= 360$	360	M1 200, 90 and 50 seen M1 $200 \times 90 = 18000$ A1 cao																				
Q17	$2 \times 110 = 220$ $90 \times 2.5 = 225$ $400 \div 10 \times 4 = 160$ $220 + 225 + 160 = 605$	605 kcal	M1 $2 \times 110 = 220$ M1 $90 \times 2.5 = 225$ M1 $400 \div 10 \times 4 = 160$ A1 cao																				
Q18	Common difference is 5 Third term is $h + 10$ $h + h + 5 + h + 10 = 3h + 15$ $3h + 15 = 39$ $3h = 24$ $h = 8$	8	M1 Third term $h + 10$ seen M1 <i>ft</i> $h + h + 5$ + their ' $h + 10$ ' added and set equal to 39 A1 cao																				

Question	Working	Answer	Notes
Q19		Rotation 180° About (1, 0)	M1 Valid attempts at rotation for shapes B and C A1 Rotation A1 180° about (1, 0)
Q20	$(x + 6)(x - 2) = 0$ $x + 6 = 0$ $x - 2 = 0$	$x = -6$ and $x = 2$	M1 $(x + 6)(x - 2)$ or $x = \frac{-4 \pm \sqrt{4^2 - (4 \times 1 \times -12)}}{2 \times 1}$ seen A1 $x = -6$ or A1 Both correct answers
Q21	$120 \div 3 \times 2 = 80$ $80 \times 0.30 = \text{£}24$ $25\% \text{ of } 24 = \text{£}6$ $\text{£}24 + \text{£}6 = \text{£}30$ $30 \div 120 = 0.25$	$25p$ or $\text{£}0.25$	M1 80×0.3 or $80 \times 30p$ seen M1 <i>ft</i> 25% of answer calculated A1 $\text{£}24 + \text{£}6 = \text{£}30$ A1 <i>cao</i>

Question	Working	Answer	Notes
Q22	$2\frac{1}{3} + 1\frac{3}{4} = \frac{7}{3} + \frac{7}{4}$ $= \frac{28}{12} + \frac{21}{12} = \frac{49}{12}$ $= 4\frac{1}{12}$	$4\frac{1}{12}$	<p>M1 $\frac{7}{3} + \frac{7}{4}$ seen or $2 + 1$ and $\frac{1}{3} + \frac{3}{4}$ seen</p> <p>M1 Fractions correctly converted to common denominator</p> <p>A1 cao</p>
Q23	<p>Factors of 64: 1, 2, 4, 8, 16, 32, 64</p> <p>Factors of 80: 1, 2, 4, 5, 8, 10, 16, 20, 40, 80</p>	16	<p>M1 Factors of 64 and 80 listed (allow up to one of each missing) or prime factor trees for both 64 and 80 drawn (allow one minor error)</p> <p>A1 cao</p>
Q24	$\frac{90}{360} = \frac{1}{4}, \frac{1}{4} \text{ of } 60 = 15$ $\frac{60}{360} = \frac{1}{6}, \frac{1}{6} \text{ of } 60 = 10$ $60 - 15 - 10 = 35$ $15 \times 2.1 = 31.5$ $10 \times 3.5 = 35$ $35 \times 4 = 140$ $31.5 + 35 + 140 = 206.5g$	206.5g	<p>M1 Number of small marbles = 15</p> <p>M1 Number of medium marbles = 10, number of large marbles = 35</p> <p>M1 <i>ft</i> Attempt to multiply numbers of marbles by weights</p> <p>A1 cao</p>
Q25	$4a + 6b = 0.7$ $0.7 = \frac{7}{10}$	$\frac{7}{10}$	<p>M1 $4a + 6b = 0.7$</p> <p>A1 cao</p>

Question	Working	Answer	Notes
Q26			<p>M1 Equidistant arcs on AB either side of C seen</p> <p>M1 Attempt at two or more intersecting arcs above or below AB.</p> <p>A1 Correct construction with all construction lines visible</p>
Q27a		$10 \leq t < 15$	A1 cao
Q27b	We don't know the actual lowest and highest values for the girls.	Can't tell	<p>A1 Can't tell</p> <p>B1 A correct explanation</p>
Q28a		3.8×10^4	B1 cao
Q28b		$p = 2$ $q = -1$	<p>A1 p correct</p> <p>A1 q correct</p>
Q29a	Number of prime numbers: 4	$\frac{4}{10}$	<p>M1 4 prime numbers or 2, 3, 5 and 7 seen</p> <p>A1 $\frac{4}{10}$ oe</p>

Question	Working	Answer	Notes
Q29b	$200 \times 0.50 = \text{£}100$ Expected wins: $\frac{4}{10} \times 200 = 80$ $\text{£}100 - 80 = \text{£}20$	£20	M1 $200 \times 0.50 = \text{£}100$ M1 Expected number of wins 80 A1 cao
Q30a		$\frac{1}{2}$	B1 cao
Q30b	$\sin(30) = \frac{6}{H}$ $\frac{1}{2} = \frac{6}{H}$ $H = 12$ $\text{Area} = \frac{1}{2} \times 12 \times 10.4$ $= 62.4\text{cm}^2$	62.4cm^2	M1 $\sin(30) = \frac{6}{H}$ oe seen A1 $H = 12$ M1 <i>ft</i> $\text{Area} = \frac{1}{2} \times 12 \times 10.4$ A1 cao

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