



# Mathematics

## Paper 1

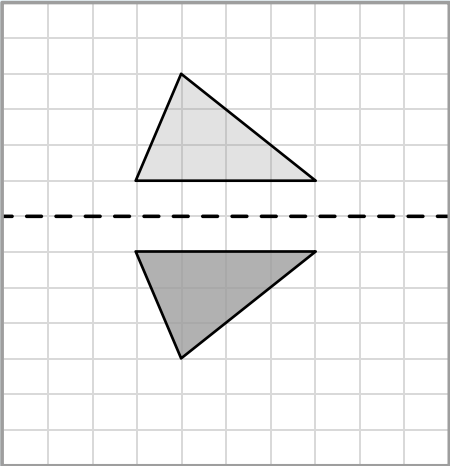
### (Non-Calculator)

### Foundation Tier

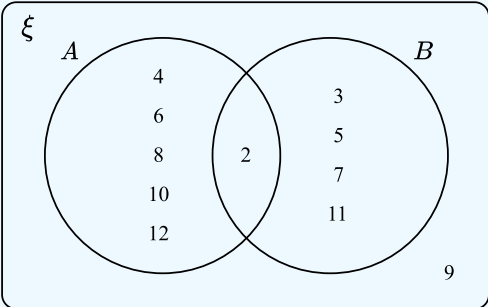
### Mark Scheme

Edexcel GCSE

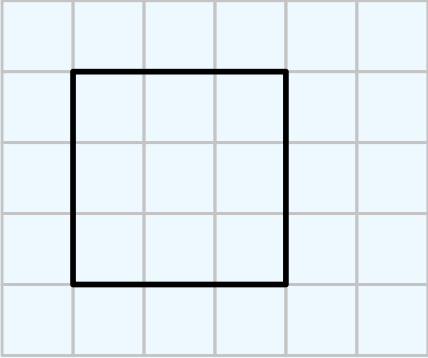
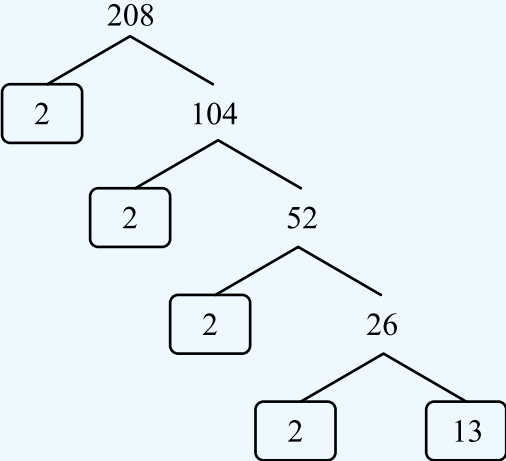
SET 3

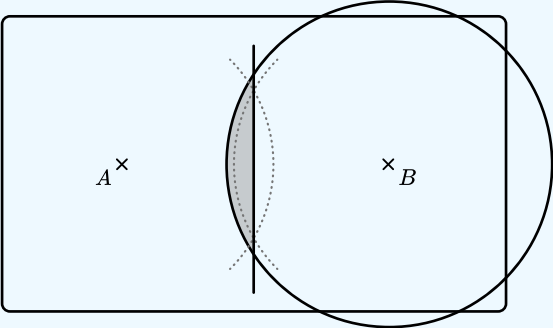
Question	Working	Answer	Notes
Q1		0.7	B1 cao
Q2		3400	B1 cao
Q3		5b	B1 cao
Q4		21 or 28	A1 for one correct answer
Q5			B1 cao
Q6	$45 \times 10 = 450$	450	B1 cao
Q7	$240 \div 2 = 120$ , £120 spent on clothes $240 - 120 - 30 = 90$	£90	M1 $\frac{1}{2}$ of 240 = 120 M1 <i>ft</i> subtracts their '120' and 30 from 240 A1 cao
Q8	$5 + 8 + 6 = 19$ $28 - 19 = 9$	9	M1 At least two of 5, 8 and 6 correct M1 <i>ft</i> Their '5', '8' and '6' subtracted from 28 A1 cao

Question	Working	Answer	Notes
<b>Q9</b>	6:18	1:3	M1 6:18 A1 cao
<b>Q10a</b>	$11 - 2 = 9$	$p = 9$	B1 cao
<b>Q10b</b>	$30 \div 5 = 6$	$q = 6$	B1 cao
<b>Q11</b>	$85 + 65 = 150$ $180 - 150 = 30$	$30^\circ$	M1 Attempt to subtract 85 and 65 from 180 A1 cao
<b>Q12a</b>	$-6 + 21 = 15$	$15^\circ\text{C}$	M1 $-6 + 21$ seen or implied A1 cao
<b>Q12b</b>		January because $-10$ is between $-13$ and $-6$	B1 January B1 correct reason
<b>Q13a</b>	$\frac{6}{8} - \frac{5}{8} = \frac{1}{8}$	$\frac{1}{8}$	M1 $\frac{3}{4}$ converted to $\frac{6}{8}$ or other equivalent fractions with the same denominators A1 $\frac{1}{8}$ oe
<b>Q13b</b>	$\frac{2 \times 3}{7 \times 10} = \frac{6}{70} = \frac{3}{35}$	$\frac{3}{35}$	M1 $\frac{2 \times 3}{7 \times 10}$ seen or implied A1 Correct simplified answer
<b>Q14a</b>	$1 - 0.3 = 0.7$	0.7	B1 cao
<b>Q14b</b>	$200 \times 0.3 = 60$	60	M1 $200 \times 0.3$ seen A1 cao

Question	Working	Answer	Notes
<b>Q15</b>	$18 \div 3 = 6$ , adult ticket = £6 $2 \times 6 = 12$ $28.50 - 12 = 16.50$ $16.50 \div 5 = 3.30$ $4 \times 6 + 2 \times 3.30 = 24 + 6.60 = £30.60$	£30.60	M1 Adult ticket = £6 M1 Child ticket = £3.30 M1 <i>ft</i> substitutes their values into $4a + 2c$ A1 cao
<b>Q16a</b>		$6p + 21$	B1 cao
<b>Q16b</b>		$5(q - 6)$	B1 cao
<b>Q17</b>	Butter: $500 \div 125 = 4$ Flour: $900 \div 150 = 6$ Sugar: $450 \div 100 = 4.5$ Eggs: $12 \div 2 = 6$ $4 \times 12 = 48$	48	M1 At least 2 values: 4, 6, 6, 6.5 seen M1 All 4 values: 4, 6, 6.5, 6 seen B1 Their minimum value multiplied by 12 A1 cao
<b>Q18</b>	$\frac{600 \times 400}{80} = \frac{240000}{80} = 3000$	3000	M1 At least two values rounded to <i>1sf</i> M1 All 3 values correctly rounded to <i>1sf</i> A1 cao
<b>Q19</b>			B1 At least 6 elements correctly placed B1 2 and 9 correctly placed B1 cao



Question	Working	Answer	Notes
Q20			B1 Length or width of 3 B1 cao
Q21	$300 \div 3 = 100$ $100 \times 50p = \text{£}50$ $50 - 40 = 10, \text{profit} = \text{£}10$ $\frac{10}{40} \times 100 = 25\%$	25%	M1 $300 \div 3 = 100$ M1 $100 \times 50p = \text{£}50$ M1 $50 - 40 = 10, \text{profit} = \text{£}10$ A1 cao
Q22		$2^4 \times 13$	M1 Attempt at prime factor tree or other valid method A1 $2^4 \times 13$ oe

Question	Working	Answer	Notes
<b>Q23a</b>		$5n + 7$	M1 $5n$ seen A1 cao
<b>Q23b</b>	$4n - 3 = 100$ $4n = 103$ $n = \frac{103}{4} = 25.75$ - not a whole number	No - the solution to $4n - 3 = 100$ is not an integer or all the terms in $4n - 3$ are odd	B1 No B1 correct reasoning
<b>Q23c</b>	$-3 + 2 = -1$ , $2 + -1 = 1$ No $-5 + 3 = -2$ , $3 + -2 = 1$ , $-2 + 1 = -1$ Yes $-4 + 1 = -3$ No $-2 + -2 = -4$ , $-2 + -4 = -6$ No	B	B1 cao
<b>Q24</b>			B1 Perpendicular bisector of AB constructed (construction lines must be seen) B1 Circle or part circle, radius $4\text{cm}$ around B B1 Correct area shaded
<b>Q25</b>	$3.65 \times 10^5 = 365000$ $36.5 \times 10^{-2} = 0.365$	$0.0365$ $36.5 \times 10^{-2}$ $365$ $3.65 \times 10^5$	M1 365000 or 0.365 seen A1 cao

Question	Working	Answer	Notes
<b>Q26</b>	Angle $BHG = 90^\circ$ Interior angle of a hexagon: $\frac{4 \times 180}{6} = 120^\circ$ Angle $ABH = 120 - 90 = 30$ $90 = 3 \times 30$ so angle $BHG = 3 \times$ angle $ABH$		B1 Angle $BHG = 90^\circ$ M1 Attempt at a correct method to find interior angle of a hexagon M1 <i>ft</i> Angle $ABH =$ their '120' $- 90$ B1 Concluding statement
<b>Q27a</b>	$\frac{1}{2} \times 4 \times 7 = 14$ $14 \times 10 = 140m^3$	$140m^3$	M1 Area of cross-section = $14m^2$ A1 cao
<b>Q27b</b>	$60 = \frac{F}{70}$ $F = 60 \times 70 = 4200N$ $P = \frac{4200}{40} = 105 N/m^2$	$105 N/m^2$	M1 $60 = \frac{F}{70}$ oe M1 $F = 4200N$ A1 cao
<b>Q28</b>	Total height of boys: $6 \times 130 = 780$ Total height of girls: $4 \times 120 = 480$ Total height of 10 players: $780 + 480 = 1260$ Mean height of 10 players: $\frac{1260}{10} = 126$	Yes	M1 $6 \times 130 = 780$ or $4 \times 120 = 480$ M1 Adds their total heights to find total of all players or 1260 seen M1 Divides by 10 B1 Concludes 'Yes'
<b>Q29a</b>	$3 \times 4 = 12$ $12p^{2+3} q^{1+2} = 12p^5 q^3$	$12p^5 q^3$	M1 12 or $p^5$ or $q^3$ seen A1 cao
<b>Q29b</b>	$a = 4(m^2)^3$	$a = 4m^6$	M1 $a = 4(m^2)^3$ A1 cao

# Help ease the pressure with a personalised revision programme for each of your target KS4 students

Our one to one GCSE revision programme is designed to help your target students reach their potential in their GCSE maths exams.

Our specialist maths tutors work one to one with each student, focusing on securing core KS4 content and building familiarity with the kinds of questions they'll be tackling in their GCSE exams.

Get in touch today:

✉ [hello@thirdspacelearning.com](mailto:hello@thirdspacelearning.com)

🔍 [thirdspacelearning.com](https://thirdspacelearning.com)

☎ 0203 771 0095