



THIRD SPACE
LEARNING

Mathematics

Paper 1

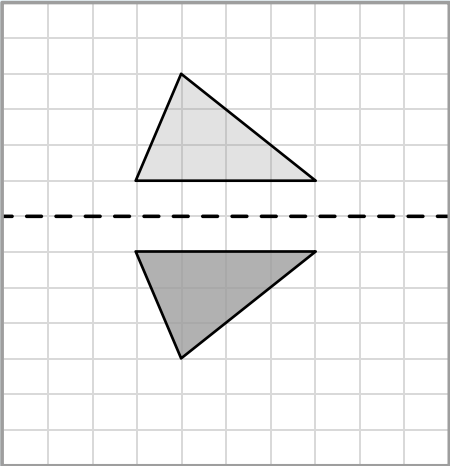
(Non-Calculator)

Foundation Tier

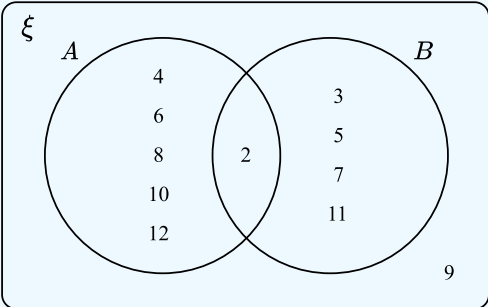
Mark Scheme

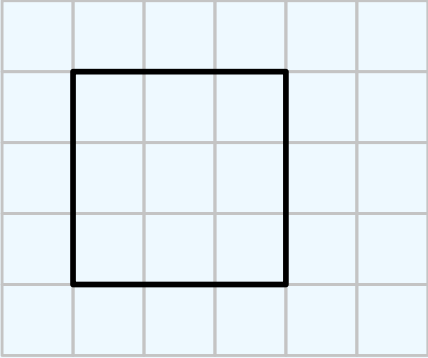
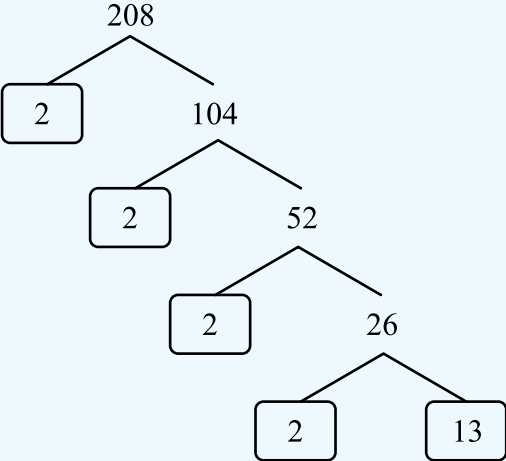
Edexcel GCSE

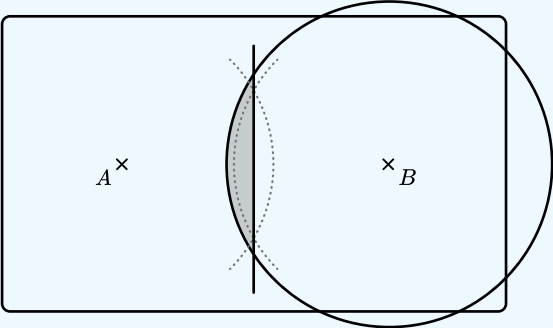
SET 3

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

Question	Working	Answer	Notes
Q15	$18 \div 3 = 6$, 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
Q16a		$6p + 21$	B1 cao
Q16b		$5(q - 6)$	B1 cao
Q17	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
Q18	$\frac{600 \times 400}{80} = \frac{240000}{80} = 3000$	3000	M1 At least two values rounded to <i>1sf</i> M1 All 3 values correctly rounded to <i>1sf</i> A1 cao
Q19			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	$300 \div 3 = 100$ $100 \times 50p = \text{£}50$ $50 - 40 = 10$, profit = £10 $\frac{10}{40} \times 100 = 25\%$	25%	M1 $300 \div 3 = 100$ M1 $100 \times 50p = \text{£}50$ M1 $50 - 40 = 10$, profit = £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
Q23a		$5n + 7$	M1 $5n$ seen A1 cao
Q23b	$4n - 3 = 100$ $4n = 103$ $n = \frac{103}{4} = 25.75$ - 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
Q23c	$-3 + 2 = -1$, $2 + -1 = 1$ 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
Q24			B1 Perpendicular bisector of AB constructed (construction lines must be seen) B1 Circle or part circle, radius 4cm around B B1 Correct area shaded
Q25	$3.65 \times 10^5 = 365000$ $36.5 \times 10^{-2} = 0.365$	0.0365 36.5×10^{-2} 365 3.65×10^5	M1 365000 or 0.365 seen A1 cao

Question	Working	Answer	Notes
Q26	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
Q27a	$\frac{1}{2} \times 4 \times 7 = 14$ $14 \times 10 = 140m^3$	$140m^3$	M1 Area of cross-section = $14m^2$ A1 cao
Q27b	$60 = \frac{F}{70}$ $F = 60 \times 70 = 4200N$ $P = \frac{4200}{40} = 105 N/m^2$	$105 N/m^2$	M1 $60 = \frac{F}{70}$ oe M1 $F = 4200N$ A1 cao
Q28	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'
Q29a	$3 \times 4 = 12$ $12p^{2+3} q^{1+2} = 12p^5 q^3$	$12p^5 q^3$	M1 12 or p^5 or q^3 seen A1 cao
Q29b	$a = 4(m^2)^3$	$a = 4m^6$	M1 $a = 4(m^2)^3$ A1 cao

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