



THIRD SPACE
LEARNING

Mathematics

Paper 3

(Calculator)

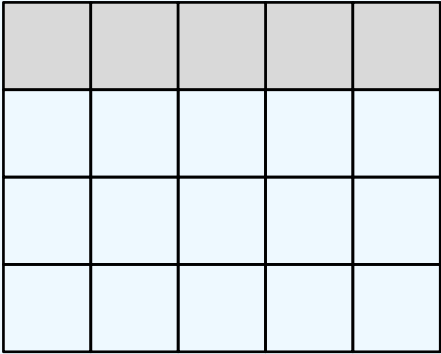
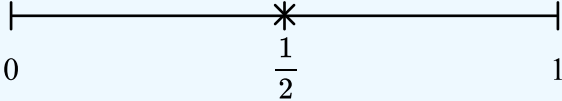
Foundation Tier

Mark Scheme

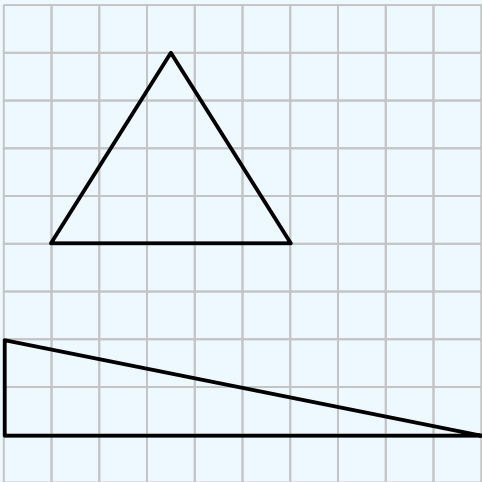
OCR GCSE

SET 3

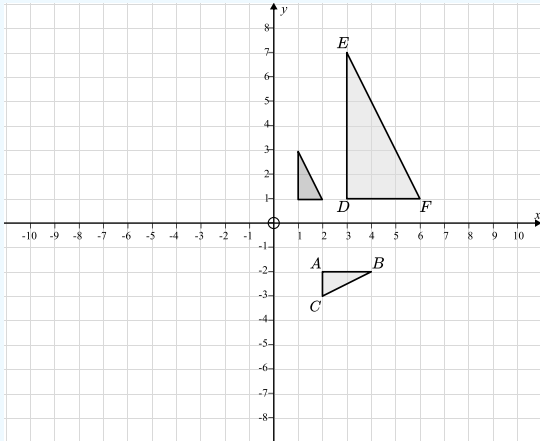
Question	Working	Answer	Notes
Q1a	$\frac{35}{100} = \frac{7}{20}$	$\frac{35}{100}$	A1 $\frac{35}{100}$ oe
Q1b	$24 \div 4 = 6$	6	A1 cao
Q1c	$\frac{2}{5} = 14$ $\frac{1}{5} = 14 \div 2 = 7$ $\frac{5}{5} = 7 \times 5 = 35$	35	M1 $14 \div 2$ or 7×5 A1 cao
Q2a		11.35am	A1
Q2b	$12 \times 3 = 36$ $12 \div 3 = 4$ $36 + 4 = \text{£}40$	£40	M1 £36 for 3 hours seen or implied A1 cao
Q3ai		Cuboid	B1
Q3aii		8	A1
Q3b			B1
Q4a		$\frac{4}{9}$	A1

Question	Working	Answer	Notes
Q4b		5 squares shaded	A1
Q5a			B1
Q5b		$\frac{2}{6}$	A1 $\frac{2}{6}$ oe
Q6	$35 + 3 \times 4.99 = \text{£}49.97$ $3 \times 20 = \text{£}60$ $60 - 49.97 = \text{£}10.03$	$\text{£}10.03$	M1 $35 + 3 \times 4.99 (= \text{£}49.97)$ or $3 \times 20 (= \text{£}60)$ M1 $\text{£}60 - \text{Their '49.97'}$ A1 cao
Q7	$25\% \text{ of } 50 = 50 \div 4 = 12.5$	12.5 litres	M1 $\frac{1}{4}$ or 25% seen M1 Attempt to find 25% of 50 A1 cao
Q8a		25	A1
Q8b		$\frac{1}{3}$	A1

Question	Working	Answer	Notes														
Q9	<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 cao, no repeats
Category A	Category B																
B	M																
B	P																
B	S																
C	M																
C	P																
C	S																
Q10	14:18 = 7:9	7:9	M1 14:18 A1 correct simplified ratio														
Q11	85 + 65 = 150 180 – 150 = 30 180 – 30 = 150	150°	M1 180 – 85 – 65 (= 30) A1 cao														
Q12	6 × 12 + 5 × 18 = 162 312 – 162 = 150 150 ÷ 25 = 6	6	M1 6 × 12 + 5 × 18 (= 162) or 312 – 162 (= 150) M1 150 ÷ 25 A1 cao														
Q13a	–6 + 21 = 15	15°C	M1 – 6 + 21 seen or implied A1 cao														
Q13b		January because –10 is between –13 and –6	B1 January B1 correct reason														

Question	Working	Answer	Notes
Q14	E.g. 	Any triangle with an area of 10cm^2	M1A1 Any triangle with an area of 10cm^2
Q15a		$2p + 5$	A1
Q15b		E.g. $a = 1, b = 2$	M1 Evidence of substituting at least one pair of values A1 Any pair of values where $a^2 < b$
Q16a	$12 - 5 = 7, 8 - 5 = 3$ $12 + 8 + 5 + 3 + 7 + 5 = 40$	40cm	M1 7cm and 3cm seen or implied A1 cao
Q16b	$x + 7 + 2x + 5 + 2x - 2 = 5x + 10$	$5x + 10$	M1 Attempt to add all three sides A1 cao
Q17a	$5.6 \times 10 = 56\text{km}$	40km	M1 $5.4 - 5.8\text{cm}$ measured A1 56km (their $5.4 - 5.6 \times 10$)
Q17b		034°	M1 A1 034°

Question	Working	Answer	Notes
Q18a		$\frac{7}{9}$	B1
Q18b	$\frac{5}{9} = 30$ $\frac{1}{9} = 30 \div 5 = 6$ $\frac{9}{9} = 6 \times 9 = 54$	£54	M1 $\frac{5}{9} = 30$ or $30 \div 5$ M1 12 : 42 A1 cao
Q19	$12F = PQ$ $P = \frac{12F}{Q}$	$P = \frac{12F}{Q}$	M1 Multiply by 12 A1 cao
Q20	$A : 56 \times 8 = \text{€}448$ $B : 1.14 \times 400 = \text{€}456$	Travel agent <i>B</i> will give Hamza €8 more	M1 56×8 seen or implied A1 €448 M1 1.14×400 A1 €456 A1 Correct answer following correct working
Q21a		4700	A1
Q21b		0.006	A1
Q21c		$5.25 \leq n < 5.35$	A1 One bound correct A1 cao
Q22a	$4n + 5 = 6n - 21$ $5 = 2n - 21$ $26 = 2n$ $n = 13$	$n = 13$	M1 $6n - 21$ or correct first step M1 $2n = 26$ or correct next steps A1 cao

Question	Working	Answer	Notes
Q22b	$p^3 = 125$ $p = \sqrt[3]{125} = 5$	$p = 5$	M1 Divide by 2 A1 cao
Q23ai		3	B1
Q23aii		7	B1
Q23iii		-3	B1
Q23b		3	A1
Q24a			M1 Rotation of 90° anti clockwise A1 cao
Q24b		Enlargement, scale factor 3, centre of enlargement (0, 1)	B1 Enlargement B1 Scale factor 3 B1 Centre (0, 1)
Q25a	$8 + 3 \times 10 + 5 \times 12 + 2 \times 14 + 3 \times 16 +$ $2 \times 18 = 210$ $210 \div 16 = 13.125$	13.125	M1 Adds all values and divides by 16 A1 cao

Question	Working	Answer	Notes
Q25b		*No clothes size 13.125 *Doesn't give us useful information about actual sizes of clothes sold	B1 A relevant statement
Q25c		Mode - it gives us information about the most common clothes size - useful for stock	B1 Mode B1 A relevant statement
Q26	$Q: (\frac{0+12}{2}, \frac{10+2}{2}) = (6, 6)$ $P - Q$: along 6, up 3 $Q - R$: along 12, up 6 $R: (18, 12)$	(18, 12)	M1 Point Q correct A1 x or y coordinate correct A1 cao
Q27	$2000 \times 1.04^3 = \text{£}2249.73$ 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
Q28	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
Q29a	$D = S \times T$ $D = 30 \times \frac{5}{60} = 2.5 \text{ miles}$	2.5 miles	M1 $30 \times \frac{5}{60}$ A1 cao

Question	Working	Answer	Notes
Q29b	$T = \frac{D}{S}$ $T = \frac{2.5}{20} = \frac{1}{8} \text{ hour}$ $\frac{1}{8} \times 60 = 7.5 \text{ minutes}$ <p>It will take 2.5 minutes longer</p>	No - it will take 2.5 minutes longer	M1 $2.5 \div 20$ A1 Correct conclusion following correct working
Q30a	<p>Spinner 1</p> <p>Spinner 2</p> <p>$\frac{1}{3}$ Lands on 1</p> <p>$\frac{2}{3}$ Doesn't land on 1</p> <p>$\frac{1}{4}$ Lands on 1</p> <p>$\frac{3}{4}$ Doesn't land on 1</p> <p>$\frac{1}{4}$ Lands on 1</p> <p>$\frac{3}{4}$ Doesn't land on 1</p>		M1 At least two values correct A1 cao
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	$88\% = 8360$ $1\% = 8360 \div 88 = 95$ $100\% = 95 \times 100 = \text{£}9500$	£9500	M1 $88\% = 8360$ seen or implied A1 cao

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