

Level 2 - Section A: Mark Scheme

Question	Process	Mark	Mark Ref	Evidence
Q1	Begins to work with ratio	1 or	A	$1500 \div (3 + 2 + 1) (=250)$ oe
	Full process to find the amount of blue paint	2 or	AB	'250' \times 2 (=500) oe
	Correct answer	3	ABC	500 (ml)
Total marks for question 3				

Question	Process	Mark	Mark Ref	Evidence
Q2	Process to multiply a consistent value of number of houses by frequency	1 or	A	e.g. 3×7 or 8×6 or 13×5 or 18×2 Allow use of 'midpoints' provided they are consistent and within an interval including the end points OR 21 and 48 and 65 and 36 seen (condone 1 error or omission)
	Full process to find the estimate of the mean	2 or	AB	$(3 \times 7 + 8 \times 6 + 13 \times 5 + 18 \times 2) \div (7 + 6 + 5 + 2) (=8.5)$ Allow use of 'midpoints' provided they are consistent and within an interval including the end points
	Accurate figure	3	ABC	8.5 Accept 8 or 9, supported by accurate working
Total marks for question 3				

Question	Process	Mark	Mark Ref	Evidence
Q3	<p>Begins to work with 12 or 24 months, figure could be rounded, or difference in costs using rounded figures</p> <p>Full process to find total cost of one offer or cost difference over 24 months</p> <p>Full process to find total savings</p> <p>Valid decision with accurate figures supported by working.</p>	<p>1 or</p> <p>2 or</p> <p>3</p> <p>4</p>	<p>A</p> <p>AB</p> <p>ABC</p> <p>ABCD</p>	<p>e.g. $60 \times 24 (=1440)$ OR $10 \times 24 (=240)$ OR $60 - 10 (=50)$ OR $900 - 40 (=860)$</p> <p>e.g. '1440' + 40 (=1480) or '240' + 900 (=1140) OR '50' \times 24 (=1200) Allow using accurate figures for marks A and B only</p> <p>e.g. '1480' – '1140' (=340) oe OR '1200' – '860' (=340) oe</p> <p>e.g. Yes AND (£) 340</p>
Total marks for question		4		

Question	Process	Mark	Mark Ref	Evidence
Q4	Process to find the volume Accurate figure for volume of water Process to convert between cm ³ and litres Uses the conversion rate appropriately or works with proportion Full process to find figures to compare Valid decision with accurate figures	1 or 2 1 1 or 2 or 3	A AB C D DE DEF	30 × 100 × 30 (=90 000) 90 000 (cm ³) oe e.g. '90 000' ÷ 1000 (=90) e.g. '90' ÷ 4.5 (=20) oe OR 10 gallons is 45 litres OR 36 ÷ 2 (=18) Calculations may be seen using a build-up method e.g. '20' × 2 (=40) OR '18' × 4.5 (=81) oe OR '90' ÷ 4.5 (=20) oe and 36 ÷ 2 (=18) e.g. Yes AND 40 (fish) OR Yes AND 81 (litres) and 90 (litres) OR Yes AND 20 (gallons) and 18 (gallons)
Total marks for question		6		

Level 2 - Section B: Mark Scheme

Question	Process	Mark	Mark Ref	Evidence
Q1(a)	Process to find the median	1 or	A	e.g. $(-2 + -9) \div 2 (= -5.5)$
	Writes a comparative statement	2	AB	e.g. -5.5 and the median value for set B is smaller than set A.
Q1(b)	Valid check for the median	1	C	e.g. $'-5.5' \times 2 = -11$ and $-2 + -9 = -11$
Total marks for question		3		

Question	Process	Mark	Mark Ref	Evidence
Q2(a)	Completes sample space table	1	A	correct cells in the table, see solution below.
Q2(b)	Accurate figure	1	B	$\frac{1}{36}$ oe
Q2(c)	Accurate figure	1	C	$\frac{6}{36}$ oe
Total marks for question		3		

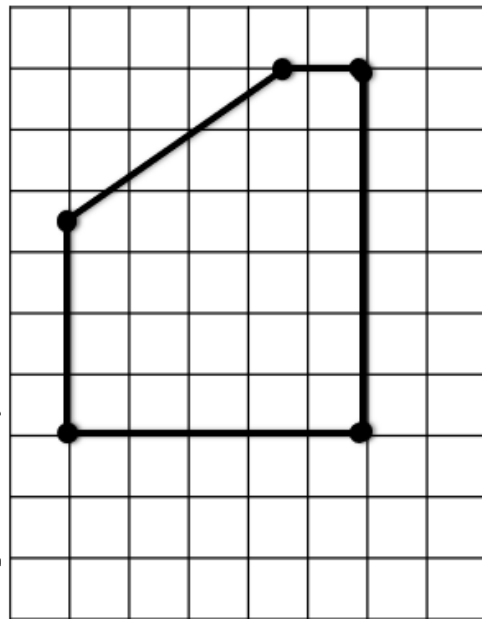
Correct answer for Q2a

+	1	-2	3	-4	5	-6
-1	0	-3	2	-5	4	-7
2	3	0	5	-2	7	-4
-3	-2	-5	0	-7	2	-9
4	5	2	7	0	9	-2
-5	-4	-7	-2	-9	0	-11
6	7	4	9	2	11	0

Question	Process	Mark	Mark Ref	Evidence
Q3	<p>Begins the process to work with income</p> <p>Process to find total annual or monthly or weekly income for both jobs</p> <p>A process to form an appropriate fraction</p> <p>Accurate figure (given as fraction in its simplest form)</p>	<p>1 or 2</p> <p>1 or 2</p>	<p>A</p> <p>AB</p> <p>C</p> <p>CD</p>	<p>e.g. $2600 \times 12 (=31200)$ or $80 \times 39 (=3120)$ OR $80 \times 39 \div 12 (=260)$ OR $2600 \times 12 \div 52 (=600)$ or $80 \times 39 \div 52 (=60)$</p> <p>e.g. $2600 \times 12 + 80 \times 39 (=34320)$ OR $'3120' \div 12 + 2600 (=2860)$ OR $2600 \times 12 \div 52 + 80 \times 39 \div 52 (=660)$</p> <p>e.g. $\frac{'3120'}{\{\text{total}\}}$ or $\frac{'260'}{\{\text{total}\}}$ or $\frac{'60'}{\{\text{total}\}}$</p> <p>Accept $\{\text{total}\}$ to be the total of all income or the total of the office income annually or monthly or weekly</p>
Total marks for question		4		

Question	Process	Mark	Mark Ref	Evidence
Q4	Begins to draw front elevation	1 or	A	A rectangle 6 sq lengths by 5 sq lengths OR 2 of: $1.5 \div 3 (=5)$, $10.5 \div 3 (=3.5)$, $4.5 \div 3 (=1.5)$, $18 \div 3 (=6)$, $7.5 \div 3 (=2.5)$ OR Pentagon with at least 2 correct sides: 5, 3.5, 4.3, 1.5, 6 sq lengths and 2 right angles at the base OR Similar pentagon in incorrect scale
	Improves front elevation	2 or	AB	Pentagon with at least 3 correct sides: 5, 3.5, 4.3, 1.5, 6 sq lengths and 3 right angles OR Fully correct pentagon in incorrect orientation
	Correct front elevation	3	ABC	Pentagon with all correct sides: 5, 3.5, 4.3, 1.5, 6 sq lengths and 3 right angles in correct orientation
Total marks for question 3				

Example of a fully correct answer



Question	Process	Mark	Mark Ref	Evidence
Q5	Fully correct route	1	A	Route starts and ends at E and covers the total distance of between 15 and 20 km (between 9 and 12 miles) and goes through point C at least once e.g. E, D, C, A, F, E Can include going through the same point twice May be implied by subsequent calculations
	Converts between miles and km	1	B	e.g. $15 \times 0.6 (=9)$ or $20 \times 0.6 (=12)$ or $0.25 \div 0.6 (=0.41..)$ or ' $10' \div 0.6 (=16.66..)$
	Process to find total distance for their route	1 or	C	e.g. $1.75 + 2.25 + 5.5 + 0.25 + 0.25 (=10)$ oe Must start and end at E and go through at least two other points
	Accurate distance figure for their route	2	CD	e.g. 10 or 16.66.. truncated or rounded to 1 d.p. or better
	Distance for their route with stated units	1	E	e.g. 10 miles or 16.6... km Award this mark for correct units stated even if figure for their distance is inaccurate
Total marks for question				5

Question	Process	Mark	Mark Ref	Evidence
Q6	Process to find area of one face	1 or	A	$2.5^2 (=6.25)$
	Full process to find surface area of the cube	2 or	AB	$6 \times 2.5^2 (=37.5)$
	Accurate figure	3	ABC	37.5
Total marks for question		3		

Question	Process	Mark	Mark Ref	Evidence
Q7(a)	Begins to work with percentage	1 or	A	$0.18 \times 389 (=70.02)$ oe OR $1 - 0.18(=0.82)$ OR $330.98 \div 389 (=0.85..)$
	Full process to find figures to compare	2 or	AB	$'0.82' \times 389 (=318.98)$ oe OR $330.98 \div '0.82' (=403.63..)$ oe OR $1 - 0.18(=0.82)$ and $330.98 \div 389 (=0.85..)$ OR $0.18 \times 389 (=70.02)$ and $389 - 330.98 (=58.02)$
	Valid decision with accurate figures	3	ABC	e.g. No AND (£)318(.98) (correct new price) OR No AND (£)403(.63..) (original price) OR No AND 82(%) and 85(.0.. %) oe OR No AND (£)70(.02) and (£)58(.02)
Q7(b)	Valid estimation check	1	D	e.g. $20 \div 100 \times 400 = 80$ is close to 70.02 or $80 \div 100 \times 400 = 320$ is close to 318.98 or $80 \div 100 \times 390 = 312$ is too far from 330.98
Total marks for question		4		

Question	Process	Mark	Mark Ref	Evidence
Q8	<p>Process to work with average</p> <p>Begins to work with dimensions</p> <p>Full process to find the number of fridges</p> <p>Begins to work with load times</p> <p>Full process to find figures to compare</p> <p>Valid decision with accurate figures from their correct working</p>	<p>1</p> <p>1 or</p> <p>2</p> <p>1 or</p> <p>2 or</p> <p>3</p>	<p>A</p> <p>B</p> <p>BC</p> <p>D</p> <p>DE</p> <p>DEF</p>	<p>e.g. 56 identified (median) OR (52 + 60 + 55 + 59 + 54 + 63 + 56) ÷ 7 (=57)</p> <p>13600 ÷ 1000(=13.6) or 2400 ÷ 800(=3) OR 13600 ÷ 800(=17) or 2400 ÷ 1000(=2.4)</p> <p>'13' × '3' (=39) OR '17' × '2' (=34)</p> <p>e.g. '56' ÷ 24 (=2.33..) or '57' ÷ 24 (=2.375)</p> <p>e.g. '39' × '2.33..' (=91) or OR '39' × '2.375 (=92.625) OR 90 ÷ '39' (=2.307..) OR Allow use of '34' for '39'</p> <p>e.g. No AND 91 (mins) OR No AND 92(.625) (mins) OR No AND 2.30(7..) and 2.33(3..) (min per fridge)</p>
Total marks for question		6		