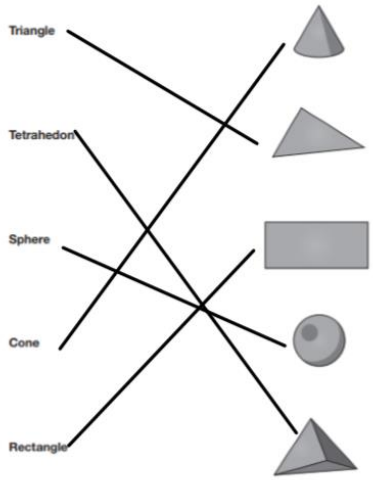
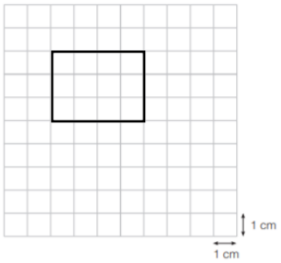
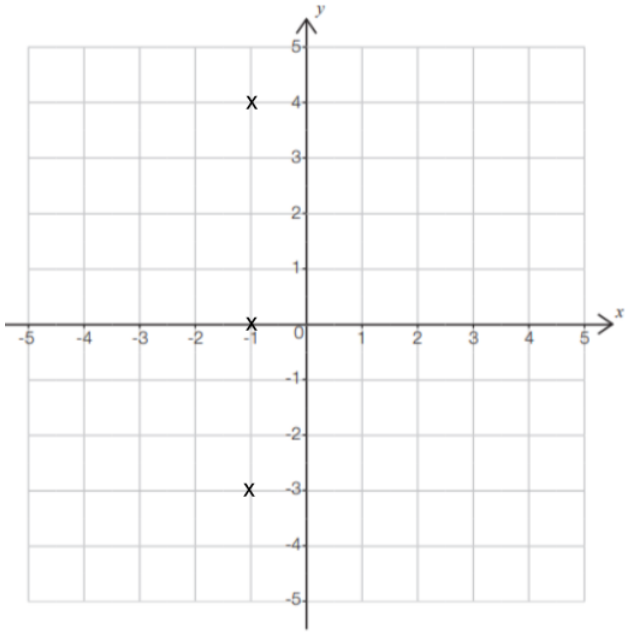
Year 9 Autumn Foundation Mark Scheme A

Question	Answer	Marks	Notes and guidance
1	Matches shapes to labels correctly 	2	Award 1 mark for at least two correct.
2	16 or 64	1	Allow both.
	13 or 3	1	Allow both.
3	Draws correct diagram e.g. 	2	Could be in any orientation. Allow 1 mark for a rectangle with at least one correct side drawn on the grid.

Year 9 Autumn Foundation Mark Scheme A

4	Indicates 2, 5 and 6 and no extras	2	Accept any clear indication – circle, underlined etc. Award 1 mark for any 2 correct values and no extras OR all 3 correct and one extra
5	Plots the three points correctly 	2	Award 1 mark for any 2 correct points.
	$x = -1$	1	
6	States both values are equal to 6 and says they are equal	2	Award 1 mark for sight of 6 e.g. 6 = 6
7	9	1	
	5	1	
	6	2	Award 1 mark for correct first step e.g. $2y = 12$ or $y + 3.5 = 9.5$

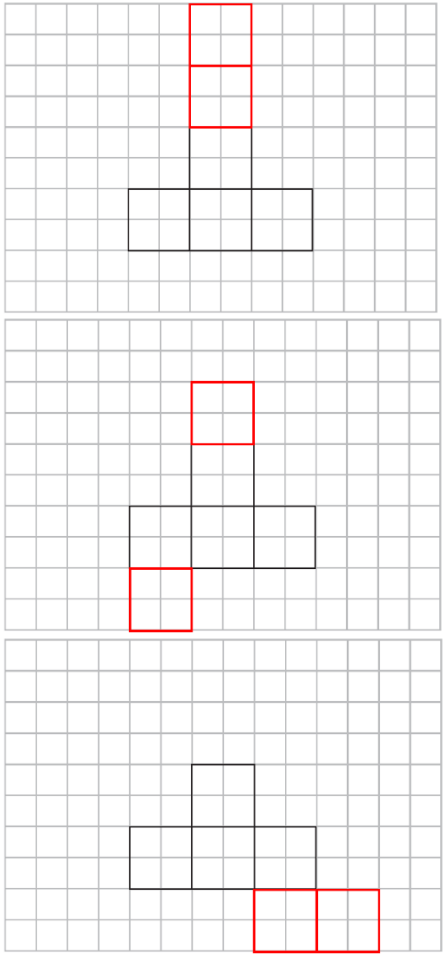
Year 9 Autumn Foundation Mark Scheme A

8	She has read the wrong scale on the protractor	1	Any reasonable explanation. Allow "It should be 55"
	140	1	Allow $\pm 2°$
9	Completes the table with –7, –3 and –1	2	Award 1 mark for any 2 correct values.
	Plots graph correctly i.e. straight line from (−2, −7) to (3, 3)	2	Award 1 mark for 4 or more of their points plotted correctly.
10	10	1	
	A and C or D and E	1	Allow both.
11	6	1	
	150	1	
	1000 cm^3	2	Award 1 mark if either 1000 or cm^3 correct..
12	5	2	Award 1 mark for correct substitution of 5 and 8 into the formula.
13	Circle centre C radius 4 cm drawn	2	Allow ± 2 mm for the radius. Award 1 mark for any attempt at a circle centre C.
14	e.g. $5 \neq 3 + 4$	1	Any reasonable explanation e.g. "It should be (3, 7)", "It should be (1, 5)" etc.
15	Angle bisected correctly, with construction lines shown.	2	Award 1 mark for evidence of correct method.
16	9	2	Award 1 mark for any complete correct method to find the area.
	7200	2	Award 1 mark for attempting to multiply their area by 800

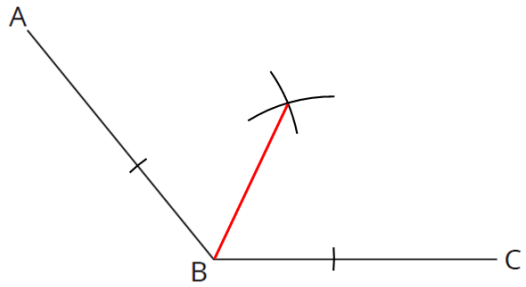
Year 9 Autumn Foundation Paper Mark Scheme - B

Question	Answer	Marks	Notes and guidance
1	(−3, 4)	1	
	(−5, −2)	1	
	Point C plotted at (0, −4)	1	Condone missing label
2	39°	1	Allow ±1°
	Obtuse Right	2	Award 1 mark for each correct name Condone inclusion of 'angle'
3	56 cm^2	4	Award 1 mark for finding the area of the rectangle (= 40 cm^2) Award 1 mark for finding the area of the triangle (= 16 cm^2) Award 1 mark for correct total of their areas Award1 mark for cm^2
4	3	1	
	e.g. they are neither factors of 12 nor 15	1	Accept any correct reasoning
5	3.5	1	Accept $3\frac{1}{2}$
	Accurate drawing of circle with radius 3.5 cm	1	Do not allow sketches

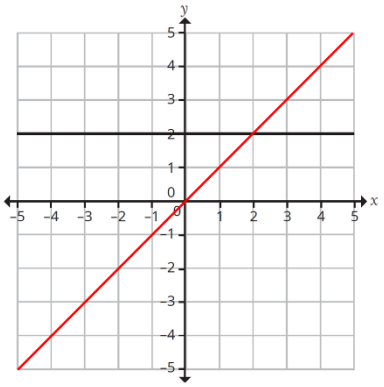
Year 9 Autumn Foundation Paper Mark Scheme - B

6	Answers include e.g. 	2	Award 1 mark for two additional congruent squares drawn attached to the existing that do not make a correct net. Award full marks for any correct net.
	24	1	

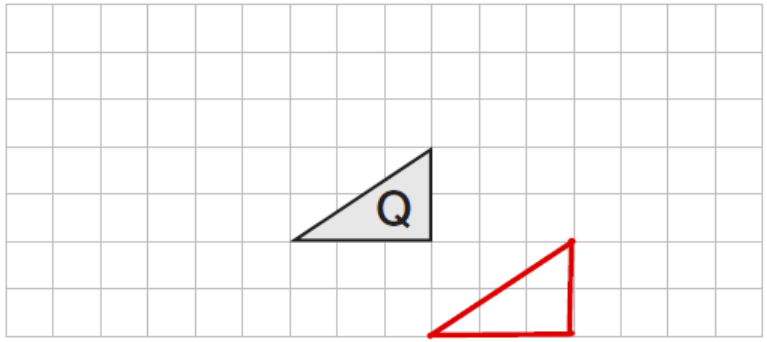
Year 9 Autumn Foundation Paper Mark Scheme - B

7	120 cm^3	3	Award 1 mark correct first step e.g. $10 \times 3 \times 4$ Award 2nd mark for 120 seen Award 1 mark for correct units cm^3
8	C and F	2	Award 1 mark for one correct hexagon, no extras OR both correct hexagon with one extra
	20	1	
9		2	Award 1 mark for correct process started Award full mark for fully correct construction
10	$2^3 = 8, 3^2 = 9$ $8 \neq 9$	2	Must have conclusion for 2nd mark Award 1 mark for correctly evaluating at least one power.
	50% of 60 = 30 $\frac{1}{4}$ of 120 = 30 Both are 30, so 50% of 60 = $\frac{1}{4}$ of 120	2	Must have conclusion for 2nd mark Award 1 mark for correctly evaluating at least one expression

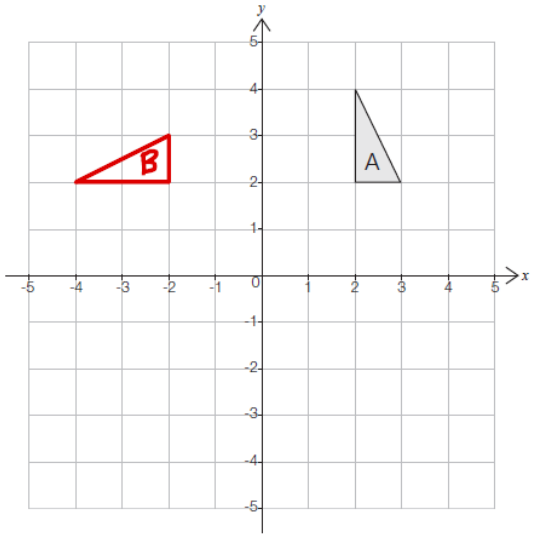
Year 9 Autumn Foundation Paper Mark Scheme - B

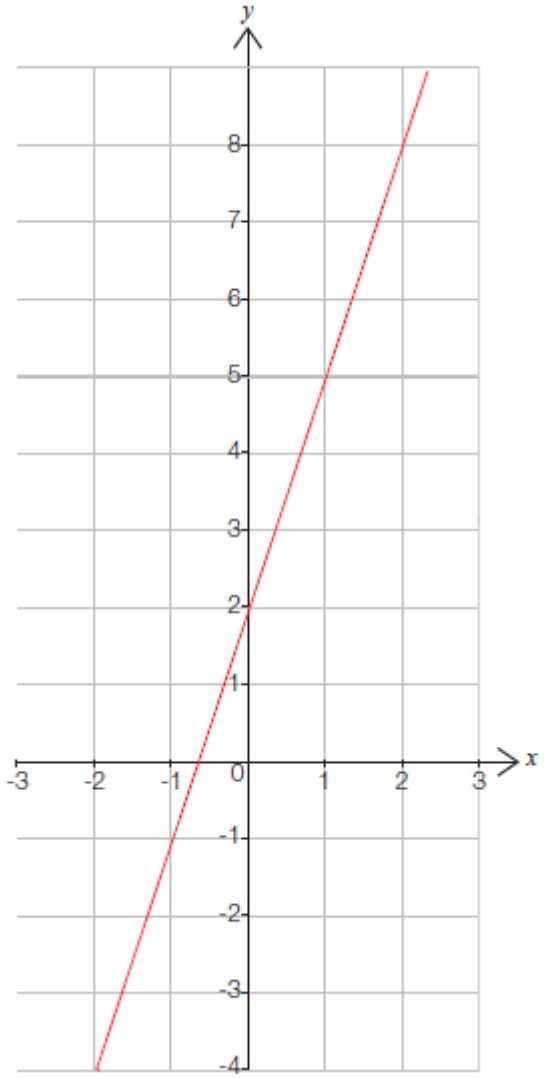
11	$y = 2$	1	
		1	
12	e.g. $2(3x + 5) + 2(x + 2) = 31$ or $3x + 5 + 3x + 5 + x + 2 + x + 2 = 31$ $8x + 14 = 31$ etc.	2	Award 1 mark for correct expression for the perimeter of ABCD, simplified or unsimplified.
	$\frac{17}{8}$ or equivalent	2	Award 1 mark for correct first step e.g. $8x = 17$, $x + \frac{14}{8} = \frac{31}{8}$ Follow through their from their 2-step equation in the first part for 1 or 2 marks.
13	18	2	Award 1 mark for forming a correct equation e.g. $4x + 17 = 89$ or working backwards from 89 e.g. $\frac{89-17}{4}$
14	(0, 5)	1	
	2	2	Award 1 mark for any correct process to find the gradient seen e.g. drawing a triangle showing change in y over change in x

Year 9 Spring Foundation Paper Mark Scheme

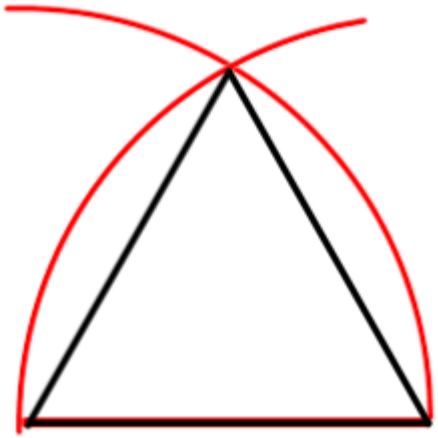
Question	Answer	Marks	Notes and guidance
1	40	2	Award 1 mark for any complete method e.g. attempt to find 34 – 13 + 19 or 34 + (19 – 13)
2	29.95	2	Award 1 mark for any correct method e.g. attempt to multiply 5.99 by 5, subtract 5p from 5 × 6 etc.
3	Cone	1	
	6	1	
	12	1	
	8	1	
4	0.039, $\frac{3}{10}$, 0.31, 35%	2	Award 1 mark for evidence of converting all the numbers to the same format OR correct answer in reverse order
5	£735	3	Award 1 mark for attempt to find 30% of £1050 Award 1 mark for subtracting their 30% from £1050
6		2	Award 1 mark for any translation that is both to the right and down, OR for 2 out of 3 vertices correctly translated.

Year 9 Spring Foundation Paper Mark Scheme

7	100 **Angles** on a **straight line** add up to **180°**	2	Award 1 mark for 100 and 1 mark for the reason. Reason must include words in bold
	Alternate angles are **equal**	1	Reason must include words in bold
	Vertically opposite angles are **equal**	1	Reason must include words in bold
8	10	2	Award 1 mark for correct first step e.g. $4m = 40$ or $m - 1.25 = 8.75$
	6	2	Award 1 mark for correct first step e.g. $\frac{d}{2} = 3$ or $d + 2 = 8$
9		2	Award 1 mark for rotation of A by 90° about any point

10		4	Award 1 mark for attempt to find coordinates using the correct equation Award 2nd mark for at least 2 correct coordinates seen or implied by the graph Award 1 mark for correctly plotting at least two points from their table of values or list Award 4th mark for completely correct line from at least (−2, 2) to (2, 8)
11	$\frac{1}{12}$	1	Accept any equivalent exact form

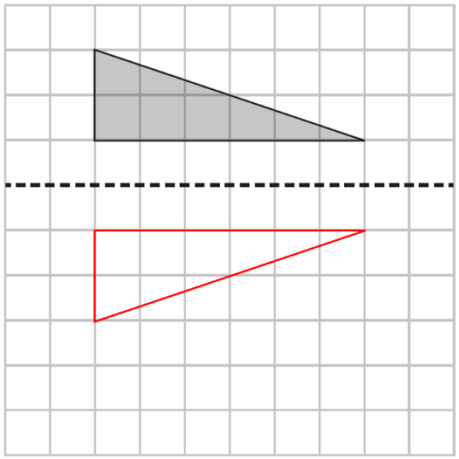
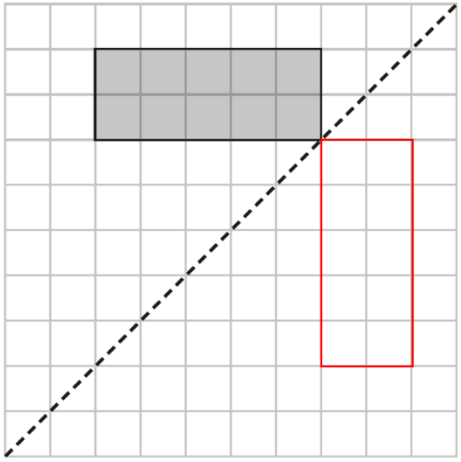
Year 9 Spring Foundation Paper Mark Scheme

12	-8	1	
	2	1	
	15	1	
13	$\sqrt{3^2+4^2}=\sqrt{25}=5$	2	Award 1 mark for $\sqrt{3^2+4^2}$ Award 2nd mark for complete working Allow $\sqrt{3^2+4^2}=5$
14	2300	3	Award 1 mark for any correct method of finding 5% of 2000 Award 2nd mark for multiplying their 5% of 200 by 3
15	e.g. 	2	Award 1 mark for one arc drawn correctly at 6cm from either end of given line segment.

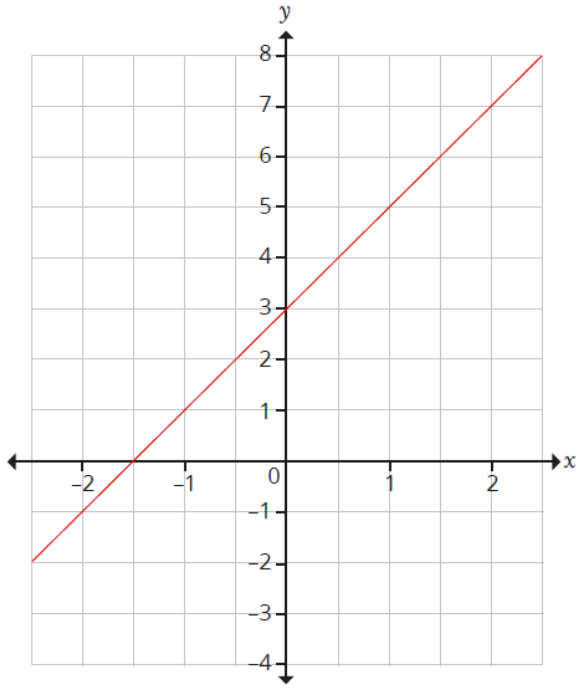
Year 9 Spring Foundation Paper Mark Scheme B

Question	Answer	Marks	Notes and guidance
1	128	2	Award 1 mark for a correct method seen e.g. $117 + 26 - 15$
2	£0.80 or 80p	3	Award 1 mark for correct method to find cost of 20 apples (£9.20) Award 1 mark for 10.00 – "their 9.20" seen or implied.
3	Trapezium	1	
	5	1	
	9	1	
	6	1	
4	$-5, -3, -0.5, 3$	1	
	$56.1, 55.7, 55.07, 54.99$	1	
5	106 cm	2	Award 1 mark for a correct method seen or implied to find $\frac{2}{3}$ of 159

Year 9 Spring Foundation Paper Mark Scheme B

6		1	
		1	
7	110°	1	
	70°	2	Award 1 mark for 180 – 110 seen or implied.
	45°	2	Award 1 mark for $2m + 90 = 180$ or equivalent (e.g. bar model) seen or implied.

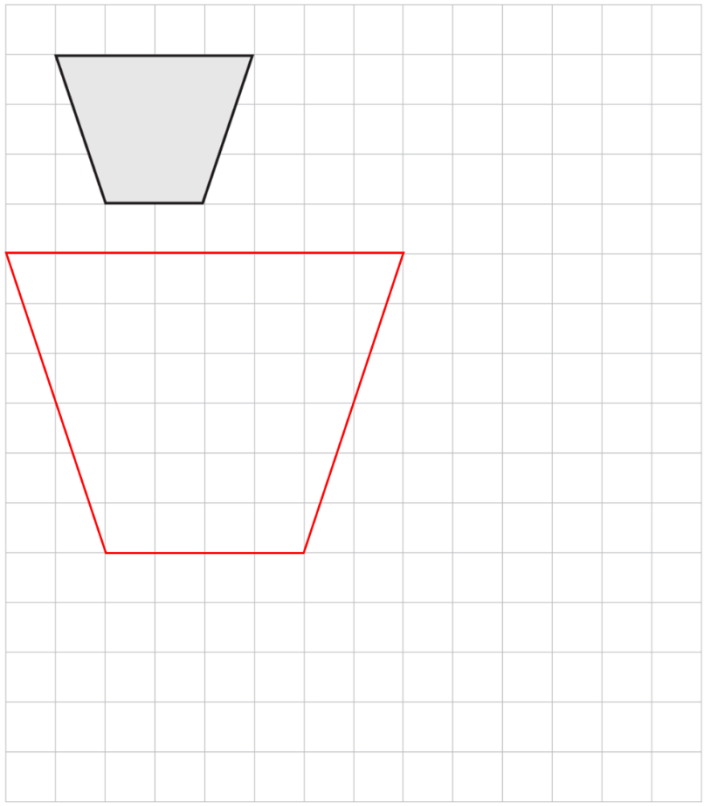
Year 9 Spring Foundation Paper Mark Scheme B

8	$t = 8.5$	1	
	$d = 16$	1	
	$c = -3$	2	Award 1 mark for correct first step to solve equation seen or implied e.g. $2c = -6$ or $c + 5 = 2$
9	<table><tr><td>x</td><td>−2</td><td>−1</td><td>0</td><td>1</td><td>2</td></tr><tr><td>y</td><td>−1</td><td>1</td><td>3</td><td>5</td><td>7</td></tr></table>	2	Award 1 mark for any two correct values
		2	Award 1 mark for correct line drawn using their points. Or Award 1 mark for correct points plotted with no line drawn.

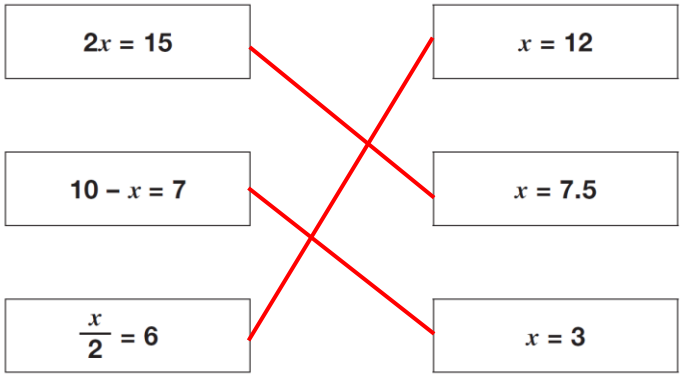
Year 9 Spring Foundation Paper Mark Scheme B

10	66 m^2	2	Award 1 mark for correct method seen e.g. $\frac{1}{2} \times 12 \times 11$
11	25	2	Award 1 mark for -5×-5 seen
12	Mo: £56 Rosie: £14	3	Award 1 mark for $70 \div 5$ seen or implied Award 2nd mark for correct method to find at least one of Mo's or Rosie's amount
13	£2600	2	Award 1 mark for a complete correct method to increase by 30% seen or implied e.g. 2000×1.3 or $2000 + (3 \times 200)$
14	30	3	Award 1 mark for finding the volume of the container and the box i.e. 240 m^3 and 8 m^3 Award 2nd mark for a correct method to find the greatest number of boxes i.e. $240 \div 8$ OR Award 1 mark for finding or drawing the number of boxes that fit along each dimension i.e. $10 \div 2$, $6 \div 2$ and $4 \div 2$ Award 2nd mark for attempt to find the product of their three divisions

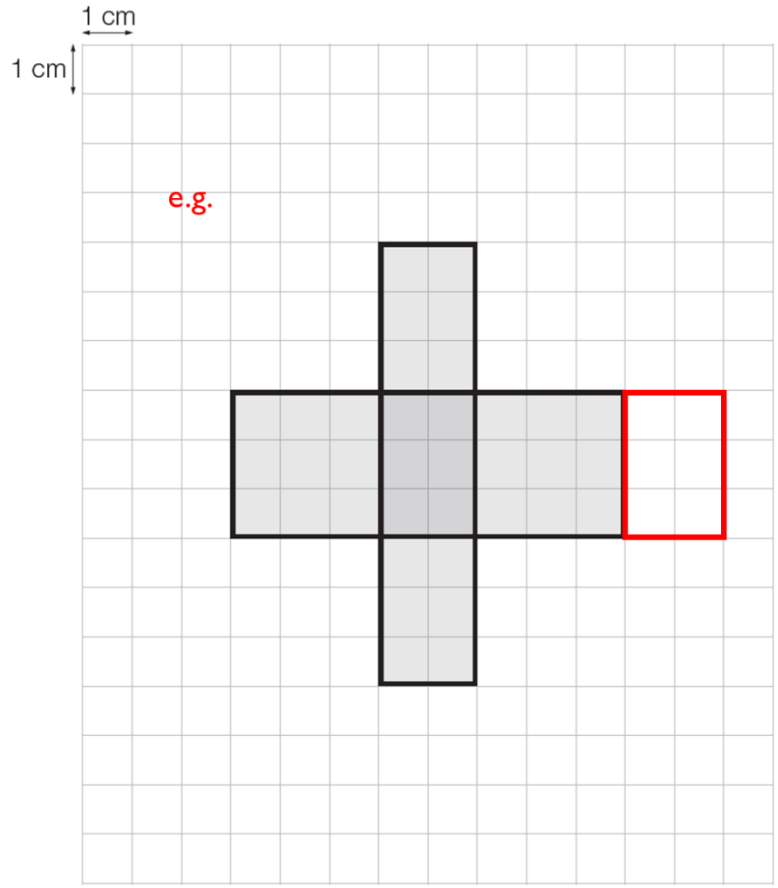
Year 9 Summer Foundation Paper Mark Scheme

Question	Answer	Marks	Notes and guidance
1	Cone	1	
2	£18	1	
	£162	1	Follow through 90% of their £180
	£27	1	Follow through their £162 ÷ 6
3		2	Accept correct answer anywhere on the grid in any orientation Award 1 mark for correct enlargement with different scale factor

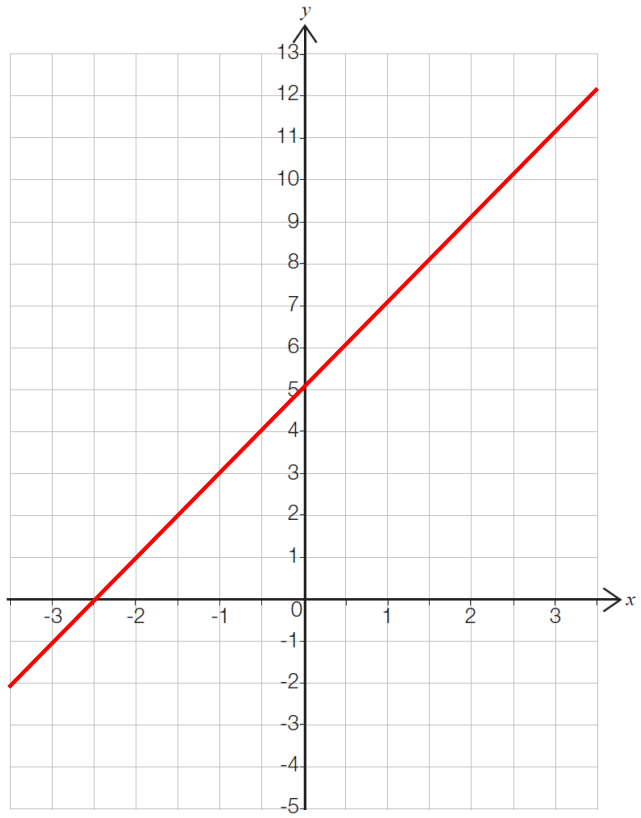
Year 9 Summer Foundation Paper Mark Scheme

4		2	Award 1 mark for at least one correct match
5	e.g. "Yes, because all multiples of 5 end in a 5 or 0"	1	Accept Yes with any correct explanation. Do not accept Yes with no or incorrect explanation.
	e.g. "Yes, because her number is even as it ends in 0"	1	Accept Yes with a correct explanation. Do not accept Yes with no or incorrect explanation.
6	e.g. "There should be six faces"	1	Accept any correct explanation. Do not accept incomplete explanations that do not indicate that a cuboid should have six faces e.g. "There aren't enough faces"

Year 9 Summer Foundation Paper Mark Scheme

6 ctd.		1	Accept any correctly placed 2 × 3 rectangular face
	18	1	
7	4	1	
	−8	1	
8	500	2	Award 1 mark for 3000 ÷ 6 seen or implied.
9	69	2	Award 1 mark for 6 × 11.5(0) seen or implied.

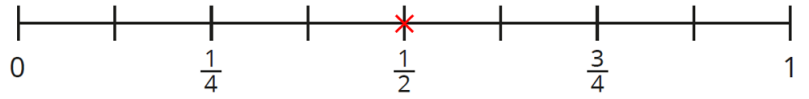
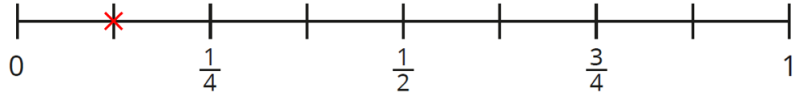
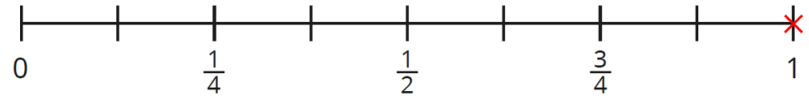
Year 9 Summer Foundation Paper Mark Scheme

<table>
<tr><td rowspan="2">10</td><td>
<table>
<tr><td>x</td><td>-3</td><td>-2</td><td>-1</td><td>0</td><td>1</td><td>2</td><td>3</td></tr>
<tr><td>y</td><td>-1</td><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td><td>11</td></tr>
</table>
</td><td>1</td><td></td></tr>
<tr><td> 
</td><td>2</td><td>Award 1 ft mark for correctly plotting all points from their table of values</td></tr>
<tr><td rowspan="2">11</td><td>7 cm</td><td>2</td><td>Award 1 mark for correctly finding scale factor between DEFG and PQRS is 3</td></tr>
<tr><td>80</td><td>1</td><td></td></tr>
</table>

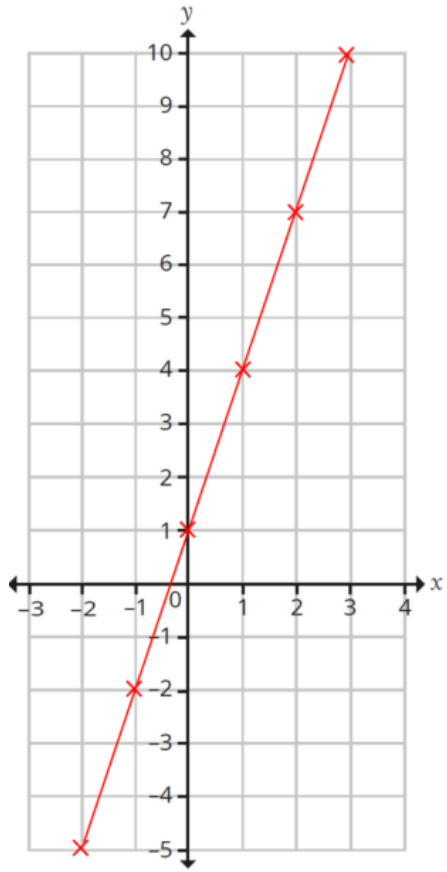
Year 9 Summer Foundation Paper Mark Scheme

12	Any one of: p and r, r and t, p and t, q and s	1	
	Any one of: p and q, r and s, s and t, p and s, r and q, t and q	1	
13	32	2	Award 1 mark for 40×0.8 seen or implied
14	$\begin{pmatrix} -7 \\ 5 \end{pmatrix}$	2	Award 1 mark for one of the horizontal or vertical components correct, or fully correct description in words e.g. "7 left and 5 up"
15	C with correct working e.g. 3 kg of bag A = £5.25, 3 kg of bag = £5, 3 kg of bag C = £4.80 **OR** Bag A = 17.5 p per 100 g, Bag B = 16.6p per 100 g, Bag C = 16p per 100g **OR** Bag A = 5.7g per penny, Bag B = 6g per penny, Bag C = 6.25g per penny etc.	3	Award 1 mark for finding one correct process so that a comparison can be made between two bags Award 2nd mark for correct conversions so that all three bags can be compared. Award full marks for fully correct answer with correct justification shown in working.
16	10 cm	2	Award 1 mark for $\sqrt{6^2 + 8^2}$ seen or implied.
17	Indicates $\frac{1}{2} \times \frac{1}{6}$	1	Accept any clear indication, tick, circled underlined etc.
18	c. -3.7	1	Allow ± 0.1
	c. -1.3 and c. 3.4	2	Allow ± 0.1 Award 1 mark for either value found or $y = 1.5$ drawn

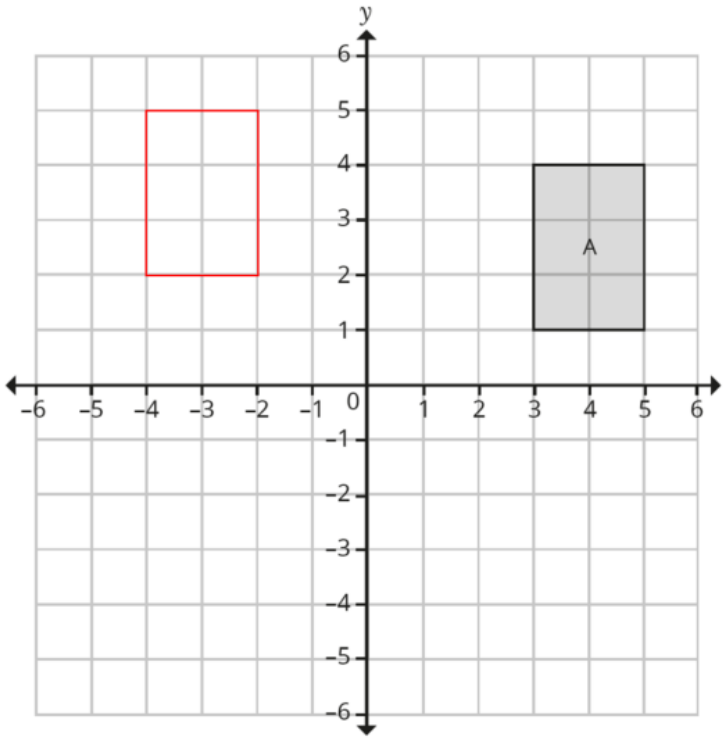
Year 9 Summer Foundation Paper Mark Scheme B

Question	Answer	Marks	Notes and guidance
1	2 : 3	1	Award 1 mark for any equivalent ratio e.g. 6 : 9
	20	1	
2	0.2	1	Accept any equivalent fraction, decimal or percentage
3	49	1	If both values incorrect, award 1 mark for clear evidence of understanding of both expressions e.g. 7×7 and $2 \times 2 \times 2 \times 2$ seen
	16	1	
4	120 cm^3	2	Award 1 mark for cm^3 or $10 \times 4 \times 3$ seen
5		1	Accept any clear indication Allow slight inaccuracy provided intention is clear.
		1	
		1	
6	$x > 7$	2	Award 1 mark for 7 seen
	-1		Award 1 mark for correct first step seen e.g. $-5 = 5c$ or $\frac{3}{5} = c + \frac{8}{5}$
7	£55	2	Award 1 mark for any fully correct method

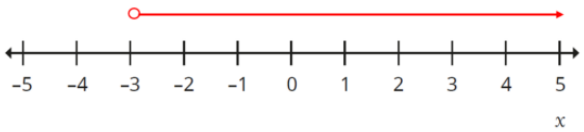
Year 9 Summer Foundation Paper Mark Scheme B

<table>
<tr><td>8</td><td>48</td><td>2</td><td>Award 1 mark for evidence of correct enlargement e.g. 18 and 6 seen</td></tr>
<tr><td rowspan="2">9</td><td><table>
<tr><td>x</td><td>−2</td><td>−1</td><td>0</td><td>1</td><td>2</td><td>3</td></tr>
<tr><td>y</td><td>−5</td><td>−2</td><td>1</td><td>4</td><td>7</td><td>10</td></tr>
</table></td><td>2</td><td>Award 1 mark for 2 correct values</td></tr>
<tr><td> 
</td><td>1</td><td>Award 1 mark for at least 4 of their values correctly plotted</td></tr>
</table>

Year 9 Summer Foundation Paper Mark Scheme B

10	112	1	
	Alternate angles are equal	1	Accept equivalent e.g. "Are the same" underlined words or equivalents must be seen
11		2	Award 1 mark for correct horizontal or vertical translation
12	Completes table correctly with D C A	2	Award 1 mark for 1 correct match

Year 9 Summer Foundation Paper Mark Scheme B

13		1	Award 1 mark for $x \geq -3$ shown
	0, 1, 2, 3 ,4	2	Award 1 mark for either -1 included OR 4 not included
14	Perpendicular bisector constructed with construction lines clearly visible.	2	Award 1 mark for at least one pair of reasonably accurate arcs seen
15	6	1	Award 1 mark for attempt to use Pythagoras' theorem consistent with the information give or their labelling of the diagram
16	13	2	Award 1 mark for correct method seen e.g. $x + x + 1 + x + 2 = 42$ or bar model showing this