

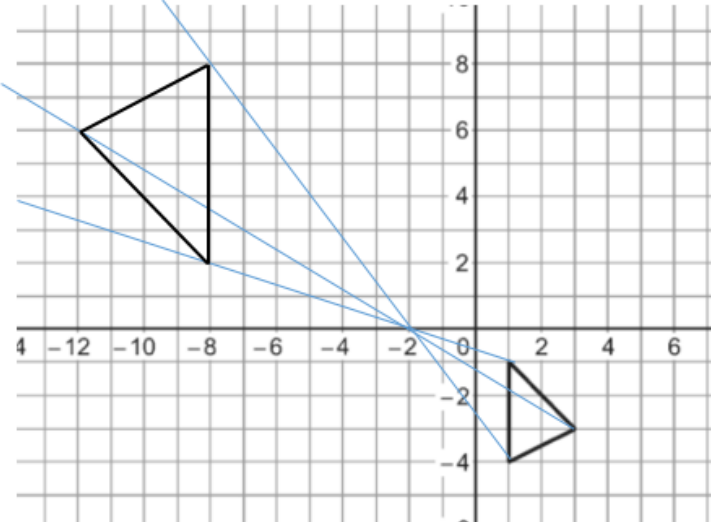
Year 10 Autumn Higher Non-Calculator Paper Mark Scheme

Question	Answer	Marks	Notes and guidance
1a	45	2	Award 1 mark for either 36 or 9 seen
1b	250	2	Award 1 mark for any two of 50, 100 or 20.
2	12°	2	Award 1 mark for attempt to find difference between -7 and 5
3a	$x^2 - 3x - 28$	2	Award 1 for any three correct terms from x^2 , $4x$, $-7x$ and 28
3a	$30a$	2	Award 1 mark for either term correct
4a	$\frac{4}{35}$	2	Allow any equivalent form Award 1 mark for attempt to write both fractions with a common denominator
4b i	0.00063	1	
4b ii	6×10^4	2	Award 1 mark for 0.6×10^5
5a	4 : 5	1	
5b	£2600, £3250 in correct order	3	Award 1 mark for $£5850 \div 9$ or £650 seen (can be in a diagram) Award 2 nd mark $4 \times$ their £650 or $5 \times$ their £650 Award final mark for correct answer

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6a	Completes table correctly <table border="1" data-bbox="376 231 1155 323"> <tbody> <tr> <td>x</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>y</td> <td>-5</td> <td>-3</td> <td>-1</td> <td>1</td> <td>3</td> <td>5</td> </tr> </tbody> </table>	x	-1	0	1	2	3	4	y	-5	-3	-1	1	3	5	2	Award 1 mark for two correct values
x	-1	0	1	2	3	4											
y	-5	-3	-1	1	3	5											
6b	Straight line drawn from (-1, 5) to (4, 5)	2	Award 1 mark for at least four or their values correctly plotted														
7	Triangle drawn with vertices at (7, 6), (7, 3) and (9, 3)	2	Award 1 mark for a correct translation by any other vector.														
8a	e.g. "Because the triangle is isosceles"	1	Condone incorrect spelling if intention is clear														
8b	$x = 4$	2	Award 1 mark for correct first step e.g. $2x + 1 = 9$ or $13x = 11x + 8$														
8c	110	2	Follow through from value of $x \geq 0$ Award 1 mark for attempt to substitute their value of x into either $13x + 1$ or $11x + 9$ or an expression for the perimeter.														
9	$-3 < x \leq 4$	2	Award 1 mark for $-3 \leq x \dots$ or $\dots x < 4$														
10	$x = -2, y = 5$	4	Award 1 mark for making coefficients of x and y the same (condone one arithmetic error) Award 1 mark for first correct value Award 1 mark for substitution to find other value Award fourth mark for fully correct														
11	46 cm	3	Award 1 mark for correct use of Pythagoras' theorem at least once e.g. 15 cm seen Award 2 nd mark for second correct use of Pythagoras as far as $\sqrt{17^2 - 15^2}$ with their value of the hypotenuse of the bottom triangle.														

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<p>13</p>	<p>Fully correct enlargement</p> 	<p>Award 2 marks for two points correct OR any fully correct enlargement by a negative scale factor about the correct centre</p> <p>Award 1 mark for one point correct idea of negative enlargement shown e.g. image drawn as a reflection of the original triangle OR correct enlargement of the triangle by a positive scale factor (except 1)</p> <p>3</p>
<p>13</p>	<p>2.7 litres</p>	<p>Award 1 mark for attempt to find volume scale factor e.g. 1.5^3 or 3.375 seen</p> <p>2</p>
<p>15</p>	<p>$-5 < x < 3$</p>	<p>Award 1 mark attempt to find critical values e.g. factorisation, use of quadratic formula</p> <p>Award 2nd mark for $-5, 3$ seen as critical values (could be on a sketch)</p> <p>Award 3rd for fully correct inequality</p> <p>3</p>
<p>16</p>	$\frac{1}{2} ab \sin C$ $= \frac{1}{2} \times 8 \times 12 \times \frac{1}{2}$ $= 24$	<p>Award 1 mark for attempt to use $\frac{1}{2} ab \sin C$, any lettering</p> <p>Award 1 mark for $\sin 30^\circ = \frac{1}{2}$ seen</p> <p>Award full marks for fully correct proof</p> <p>Condone absence of cm^2</p> <p>3</p>