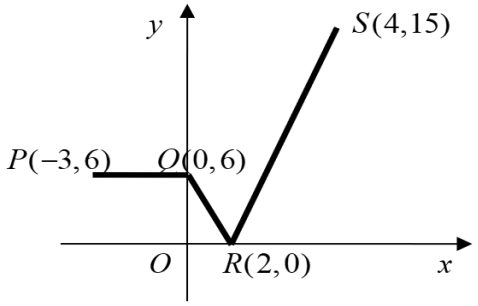
		A1: Awrt 88.3	
			(4)
			Total 9

Question Number	Scheme	Notes	Marks
8(a)	Ignore any *y* coordinates given and any labelling of points Note that coordinate pairs are $A\left(\frac{8}{5}, \frac{4}{5}\right)$ & $B\left(\frac{20}{9}, \frac{10}{9}\right)$		
	$\frac{1}{2}x = -2x + 4$	Sets $\frac{1}{2}x = ax + 4$ where $a < 0$	**1st M1**
	$\frac{1}{2}x = -2x + 4 \left\{\Rightarrow \frac{5}{2}x = 4 \Rightarrow\right\} \{x =\} \frac{8}{5}$ oe	dM1: Sets $\frac{1}{2}x = -2x + 4$ and obtains a value for *x* (which could be decimal) A1: Correct value. Must be a fraction	**dM1 A1**
	$\frac{1}{2}x = 5x - 10$	Sets $\frac{1}{2}x = 5x + b$ where $b < 0$	**3rd M1**
	$\frac{1}{2}x = 5x - 10 \left\{\Rightarrow \frac{9}{2}x = 10 \Rightarrow\right\} \{x =\} \frac{20}{9}$ oe	dM1: Sets $\frac{1}{2}x = 5x - 10$ and obtains a value for *x* (which could be decimal) A1: Correct value. Must be a fraction	**dM1 A1**
	There is no credit for answers only - some algebraic working must be seen.		
			(6)
(b)	 Do not be concerned with scaling e.g., if *P* is closer to the origin than *R* etc. There is no credit for the correct points but no sketch. May use P', Q', R' & S' or other letters - ignore any labels used for the points. Ignore any intersections with $y = \frac{1}{2}x$ or e.g., $y = \frac{3}{4}x$ shown	A sketch graph going from L to R made up of 3 straight line segments with two points positioned and labelled appropriately (*P* scores if it is in Q2, Q on positive *y*-axis, *R* on positive *x*-axis, *S* in Q1 but graph might not be the correct shape) May use numbers on axes rather than coordinates. Letters are not required. Coordinates may be indicated separately (e.g., following just having the letters on the sketch) but anything marked on sketch take precedence.	**B1**
		Fully valid sketch: same shape (horizontal line in Q2 to *y*-axis, then V with its vertex on the *x*-axis in Q1 but condone *S* being below *P* & Q and ignore the relative gradients of *QR* and *RS*) with all 4 points correct. May use numbers on axes rather than coordinates. Letters are not required. Coordinates may be	**dB1**

		indicated separately but any marked on sketch take precedence.	
			(2)
			Total 8