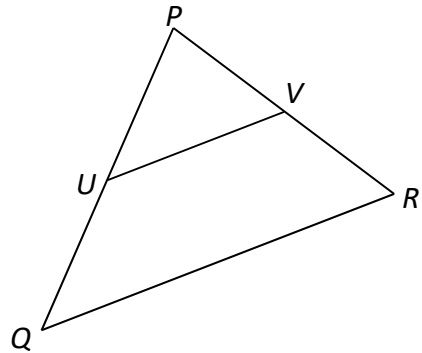
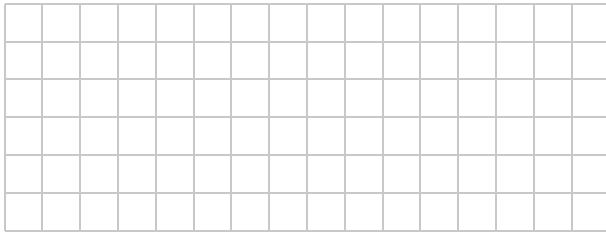


**Question 2**

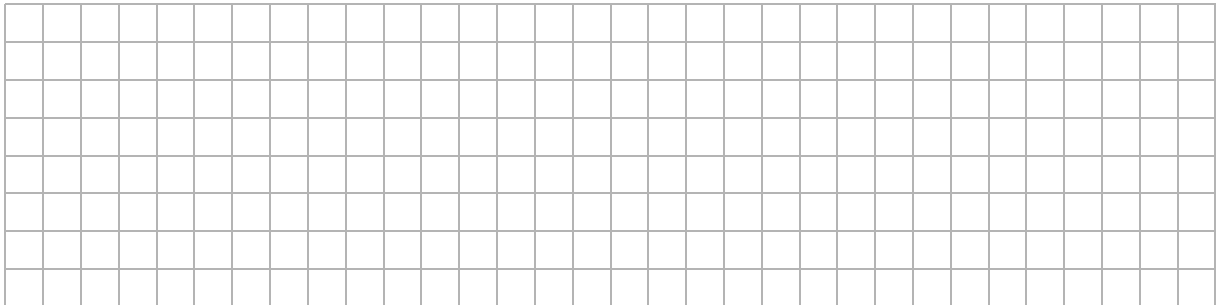
**(25 marks)**

The points  $P(7, 10)$ ,  $Q(1, 2)$  and  $R(11, 4)$  are the vertices of the triangle shown.  
The point  $U(4, 6)$  is the midpoint of  $[PQ]$  and the point  $V$  is the midpoint of  $[PR]$ .

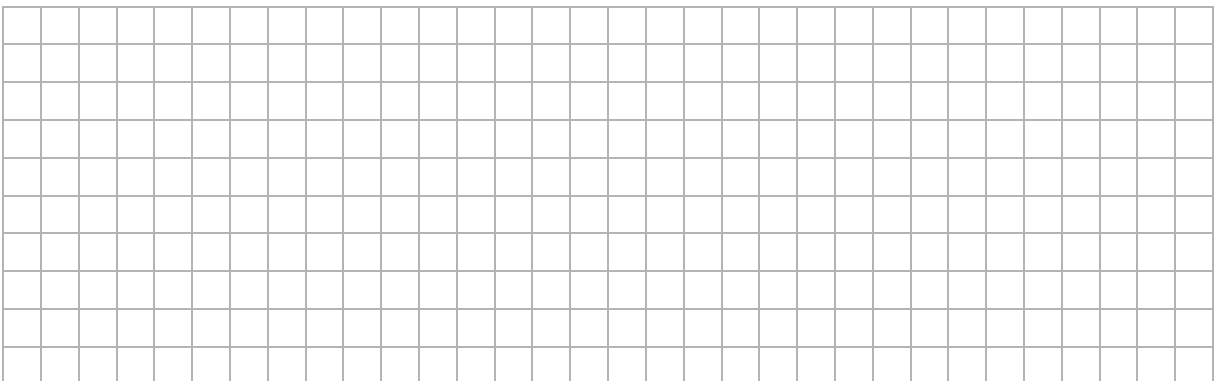
- (a)** Find the co-ordinates of  $V$ .



- (b)** Show, by using slopes, that  $UV$  is parallel to  $QR$ .



- (c)** Find the area of the triangle  $PQR$ .



- (d)** The point  $S$  is the image of the point  $Q$  under the translation  $\overrightarrow{UV}$ .  
Find the coordinates of  $S$ .

