

Write your answers in the spaces provided
You must write down all stages in your working

1 Referred to a fixed origin O , the position vectors of the points P and Q are $(10\mathbf{i} - 3\mathbf{j})$ and $(4\mathbf{i} + 6\mathbf{j})$ respectively. The point R divides PQ internally in the ratio 2:1

(a) Find the position vector of R

(2)

The point S divides OQ internally in the ratio $5:4$ and area $\Delta OPQ = \lambda$ area ΔSRQ .

(b) Find the exact value of λ .

(4)

[illegible]

Question 1 continued

(Total for Question 1 is 6 marks)

