5

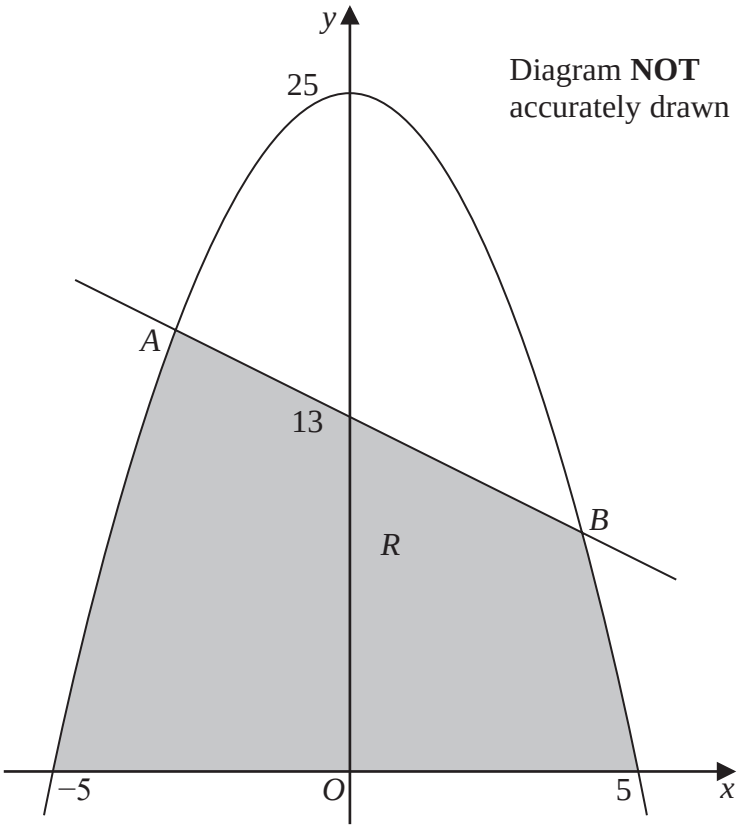

Figure 2

Figure 2 shows part of the curve with equation $y = 25 - x^2$ and part of the line with equation $y + x = 13$

The curve and the line intersect at the points A and B.

(a) Use algebra to find the coordinates of A and the coordinates of B.

(4)

The region R, shown shaded in Figure 2, is bounded by the curve, the straight line and the x-axis.

(b) Use algebraic integration to find the area of R.

(7)

Question 5 continued

Question 5 continued

Question 5 continued

(Total for Question 5 is 11 marks)