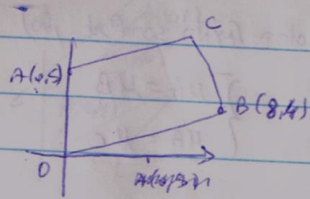


3.13  
6



$y = \frac{1}{2}x + 5$  : OB  
 $y = \frac{1}{2}x + 5$  : AC  
 $C(t, \frac{1}{2}t + 5)$  (NO)

$AO = 5 = BC = \sqrt{(t-8)^2 + (\frac{1}{2}t + 5 - 4)^2}$

$25 = t^2 - 16t + 64 + \frac{1}{4}t^2 + t + 1 \rightarrow t = 4 \rightarrow C(4, 7)$   
 $t = 8$

$M(x, y)$  ?

$OM = OA \rightarrow x^2 + y^2 = x^2 + (y-5)^2 \rightarrow y = 2\frac{1}{2}$

$OM = OB \rightarrow x^2 + y^2 = (x-8)^2 + (y-4)^2$

$x^2 + (2\frac{1}{2})^2 = x^2 - 16x + 64 + (1\frac{1}{2})^2 \rightarrow x = 3\frac{3}{4}$

$M(3\frac{3}{4}, 2\frac{1}{2})$

$R^2 = (3\frac{3}{4} - 0)^2 + (2\frac{1}{2})^2 = 20\frac{5}{16}$

$(x - 3\frac{3}{4})^2 + (y - 2\frac{1}{2})^2 = 20\frac{5}{16}$

...