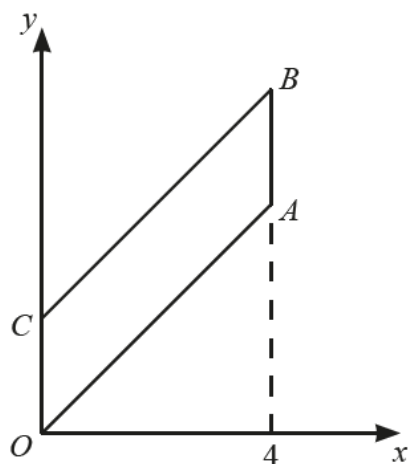


1. Nov/2020/Paper\_11/No.16



NOT TO SCALE

In the diagram,  $OABC$  is a parallelogram.  
The equation of the line  $CB$  is  $y = x + 2$ .

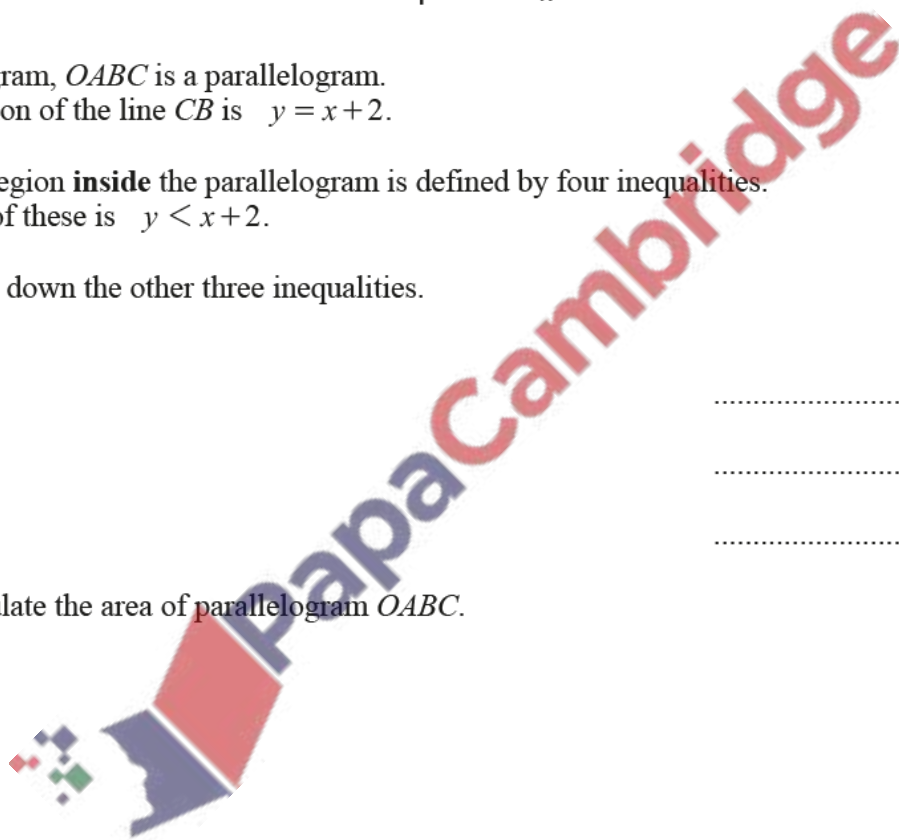
- (a) The region **inside** the parallelogram is defined by four inequalities.  
One of these is  $y < x + 2$ .

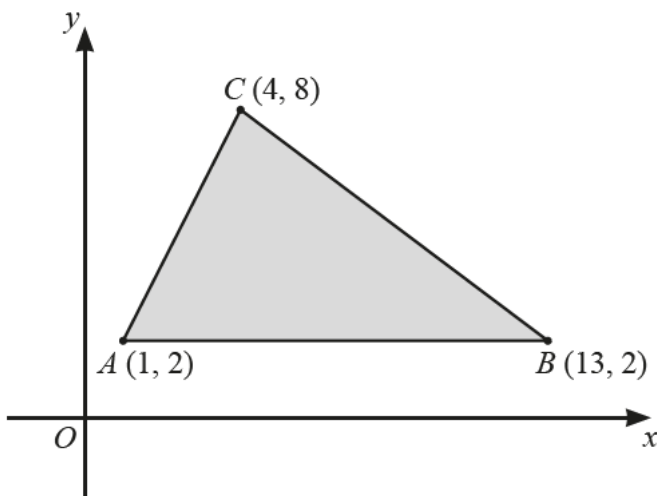
Write down the other three inequalities.

.....  
 .....  
 ..... [2]

- (b) Calculate the area of parallelogram  $OABC$ .

..... units<sup>2</sup> [1]





NOT TO SCALE

The diagram shows a triangle formed by joining the points  $A(1, 2)$ ,  $B(13, 2)$  and  $C(4, 8)$ . The equation of the line  $BC$  is  $2x + 3y = 32$ .

- (a) The region **inside** triangle  $ABC$  is defined by three inequalities. One of these is  $2x + 3y < 32$ .

Write down the other two inequalities.

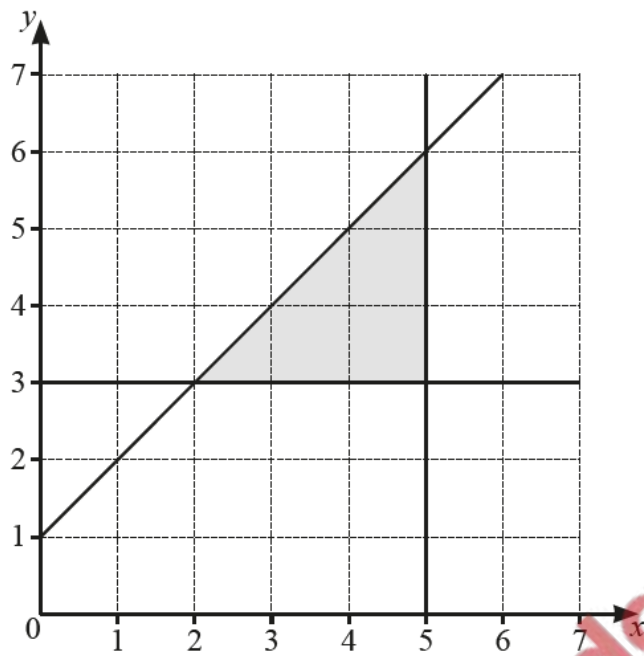
.....

..... [2]

- (b) The point  $(k, 7)$ , where  $k$  is an integer, lies **inside** triangle  $ABC$ .

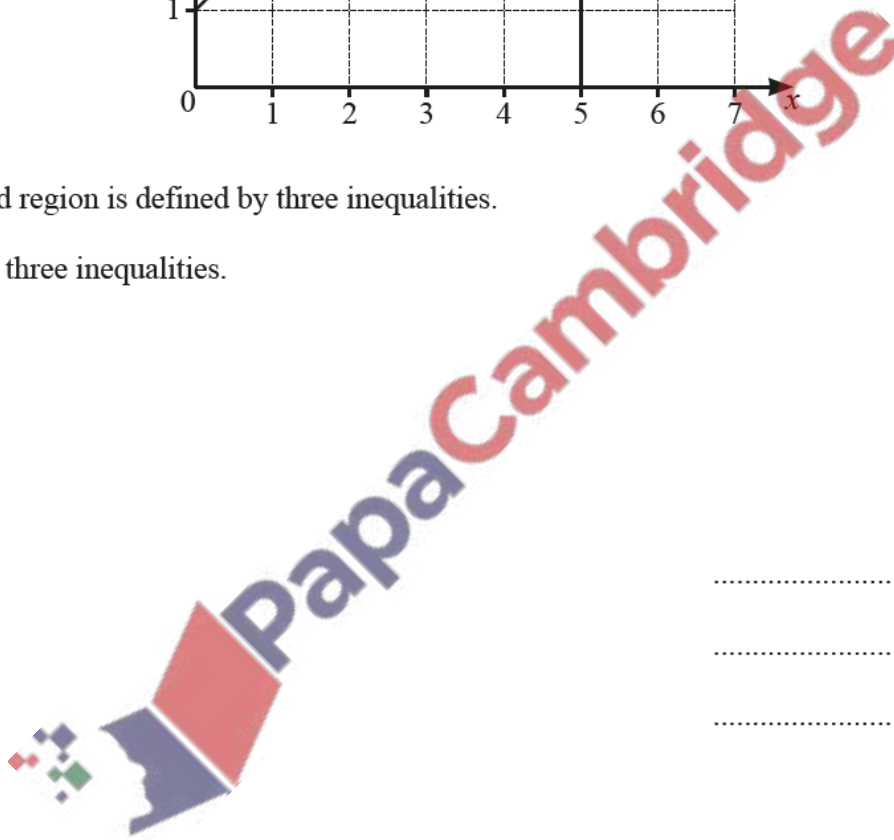
Find the possible values of  $k$ .

$k =$  ..... [2]



The shaded region is defined by three inequalities.

Find these three inequalities.



.....  
.....  
.....

[3]