

10.

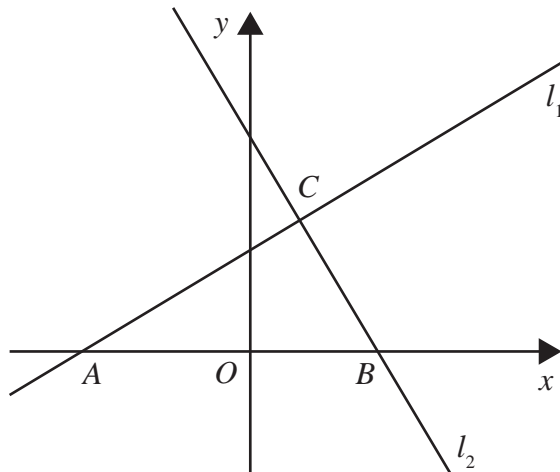


Figure 4

The line  $l_1$  has equation  $y = \frac{3}{5}x + 6$

The line  $l_2$  is perpendicular to  $l_1$  and passes through the point  $B(8,0)$ , as shown in the sketch in Figure 4.

(a) Show that an equation for line  $l_2$  is

$$5x + 3y = 40$$

(3)

Given that

- lines  $l_1$  and  $l_2$  intersect at the point  $C$
- line  $l_1$  crosses the  $x$ -axis at the point  $A$

(b) find the exact area of triangle  $ABC$ , giving your answer as a fully simplified

fraction in the form  $\frac{p}{q}$

(5)