

## 13.7) Areas between curves and lines

## Worked example

Determine the area bounded by the curve with equation  $y = x(7 - x)$  and the line with equation  $y = 2x$

## Your turn

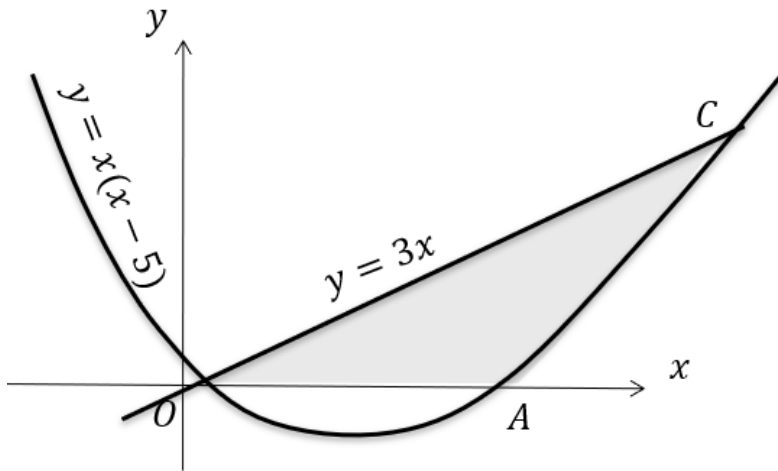
Determine the area bounded by the curve with equation  $y = x(4 - x)$  and the line with equation  $y = x$

$$\frac{9}{2}$$

## Worked example

The diagram shows a sketch of the curve with equation  $y = x(x - 5)$  and the line with equation  $y = 3x$ .

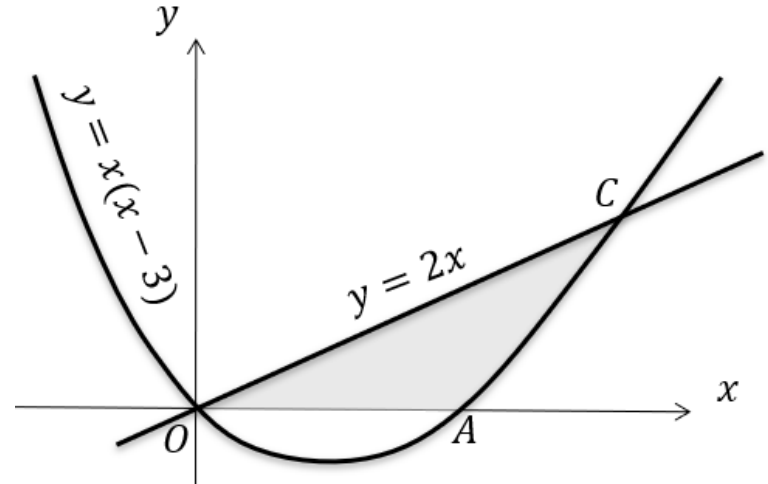
Find the area of the shaded region  $OAC$ .



## Your turn

The diagram shows a sketch of the curve with equation  $y = x(x - 3)$  and the line with equation  $y = 2x$ .

Find the area of the shaded region  $OAC$ .



$$\frac{49}{3}$$

## Worked example

Determine the area bounded by the curve with equation  $y = 5x - x^2 - 3$  and the line with equation  $y = 5 - x$

## Your turn

Determine the area bounded by the curve with equation  $y = 10x - x^2 - 8$  and the line with equation  $y = 10 - x$

$$\frac{343}{6}$$