

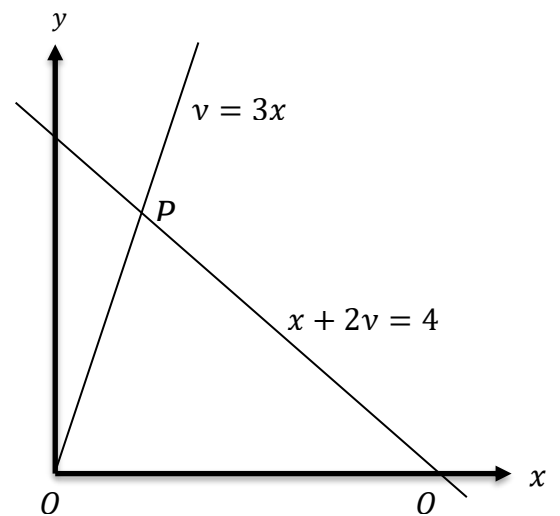
## Intersection of Lines:



### Example

The diagram shows two lines with equations  $y = 3x$  and  $x + 2y = 4$ , which intersect at the point  $P$ .

- Determine the coordinates of  $P$ .
- The line  $x + 2y = 4$  intersects the  $x$ -axis at the point  $Q$ . Determine the coordinate of  $Q$ .



## Test Your Understanding

The straight line  $L_1$  passes through the points  $(-1, 3)$  and  $(11, 12)$ .

(a) Find an equation for  $L_1$  in the form  $ax + by + c = 0$ , where  $a$ ,  $b$  and  $c$  are integers.

**(4)**

The line  $L_2$  has equation  $3y + 4x - 30 = 0$ .

(b) Find the coordinates of the point of intersection of  $L_1$  and  $L_2$ .

**(3)**