5.4) Length and area

Worked example	Your turn
Find the distance between: $(2, 4)$ and $(8, 8)$ $(-2, 4)$ and $(-9, 9)$	Find the distance between: $(2, -4)$ and $(11, 8)$ 15

Worked example	Your turn
In your head, find the distance between: $(8,2)$ and $(5,6)$	In your head, find the distance between: $(1,10)$ and $(4,14)$ 5
$(-1,-7)$ and $(11,2)$	$(-4,-2)$ and $(-12,4)$ 10
$(-23,0)$ and $(1,7)$	$(0,-9)$ and $(5,3)$ 13

Worked example

The straight line l_1 with equation $2x - y = 0$ and the straight line l_2 with equation $3x + 2y - \frac{7}{2} = 0$ intersect at point A.

O is the origin. B is the point where l_2 meets the x-axis.

Work out the area of triangle AOB

Your turn

The straight line l_1 with equation $4x - y = 0$ and the straight line l_2 with equation $2x + 3y - 21 = 0$ intersect at point A.

O is the origin. B is the point where l_2 meets the x-axis.

Work out the area of triangle AOB

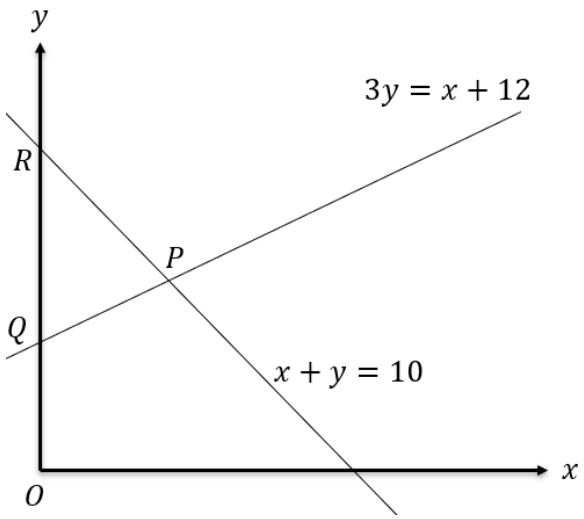
$$\frac{63}{2}$$

Worked example

Determine:

a) The length of PQ

b) The area of triangle PQR

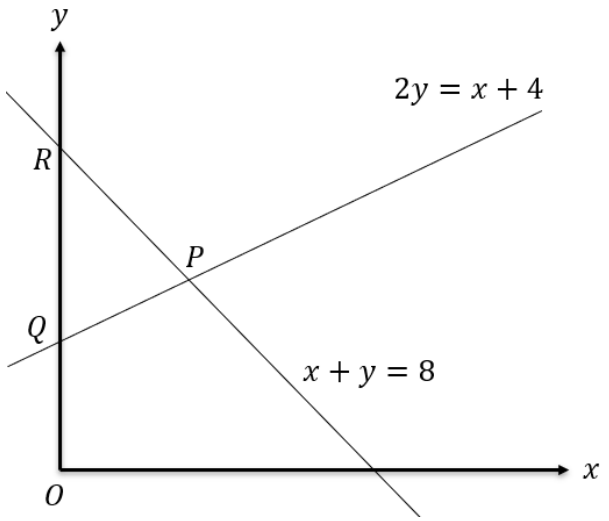


Your turn

Determine:

a) The length of PQ

b) The area of triangle PQR



a) $2\sqrt{5}$

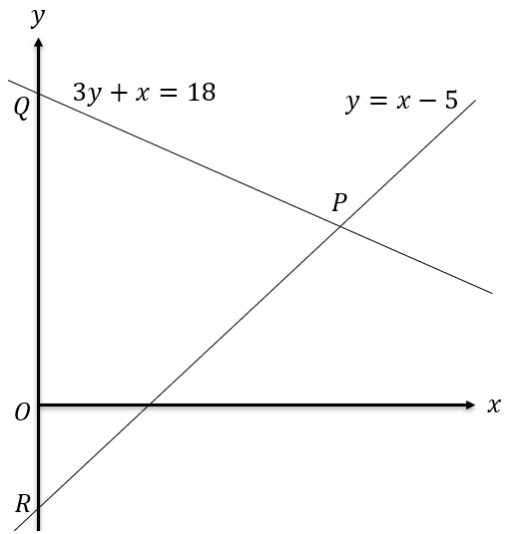
b) 12

Worked example

Determine:

a) The length of PQ

b) The area of triangle PQR

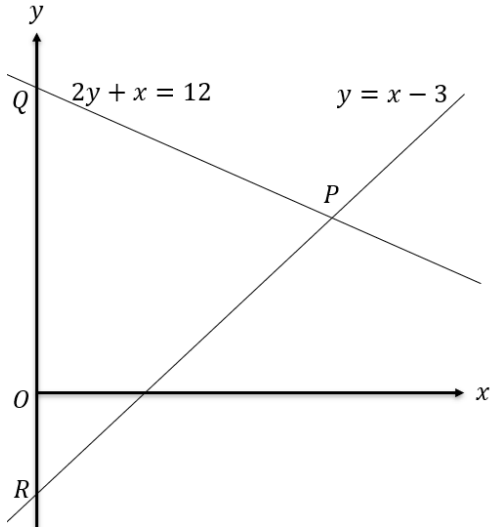


Your turn

Determine:

a) The length of PQ

b) The area of triangle PQR



a) $3\sqrt{5}$

b) 27