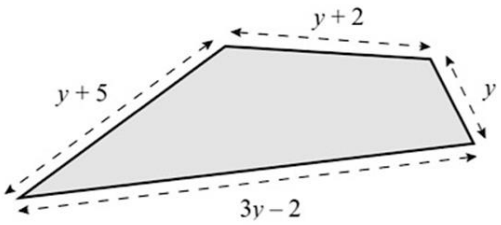
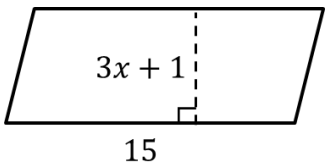
Form and Solve Linear for Problems Involving Area and Perimeter: Mixed Exercise

1 *[NZQA L1 Maths and Stats 91027/2 Sep 2021 Q1a]*
Given that the perimeter of the shape shown below is 35 cm, find the value of y.



2 The parallelogram below has an area of 105 cm^2.
Find the value of x.

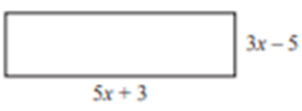


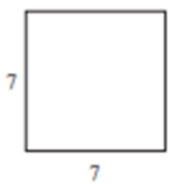
3 A rectangle has side lengths $(5-x)$ and $(2x+3)$. The perimeter of the rectangle is 20 cm.

a Find the value of x.

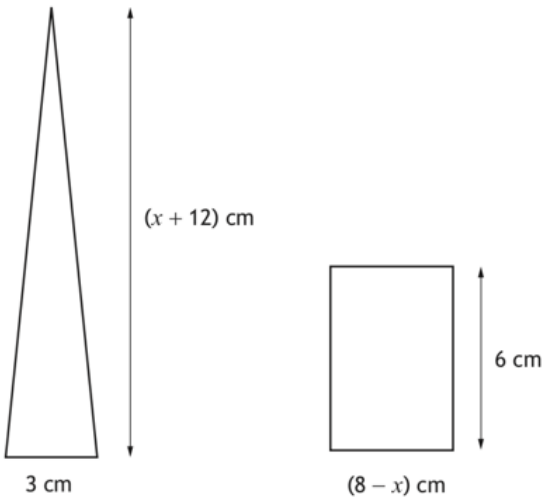
b Find the area of the rectangle.

4 *[NZQA L1 Maths and Stats 91027/2 Sep 2022 Q1a]*
The rectangle and square, shown below, have the same **perimeter** as each other.

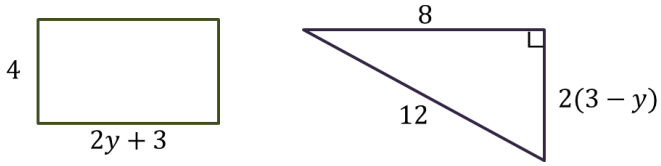




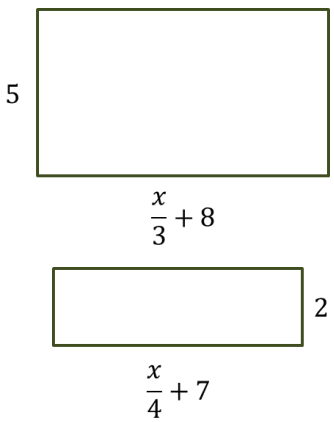
5 *[SQA National 5 2022 P1 Q15b]*
A triangle and rectangle are shown in the diagram.
Given that the area of the triangle is equal to the area of the rectangle, find algebraically the value of x.



6 The rectangle and the triangle shown have the same perimeter.
Find the area of each shape.

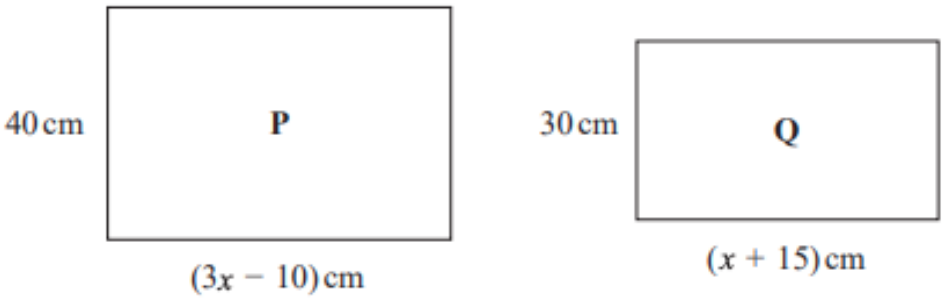


7 The area of the larger rectangle is triple the area of the smaller rectangle.
Determine the value of x.



8 *[Edexcel Linked Pair June 2017 Applications 1H Q15]*

The diagram gives information about two paintings, P and Q.
Each painting is in the shape of a rectangle.
Painting P has an area 1400 cm^2 more than the area of painting Q.
Work out the area of painting P.



☠ The smaller rectangle is a quarter of the size of the larger rectangle.
Find the shaded region.