14 Jack hires a hall for a party.

This formula is used to work out the total cost.

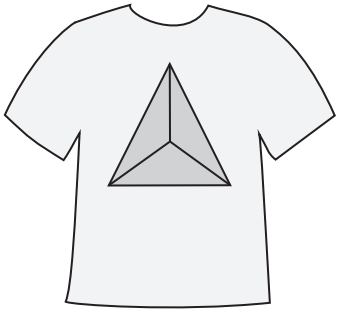
Total cost = £15 booking fee + £12.50 per hour

What is the total cost of hiring the hall from 6 pm until 11 pm?

£

1 mark

15 A shop prints designs on T-shirts.



They use this formula to work out the price for printing a design.

price = 60p × number of colours + £1.25

What is the price for printing a design that has **3** colours in it?

£

1 mark

Amina has **£5** to spend on printing a design.

What is the greatest number of **colours** she can have in the design?

Show your method

colours

2 marks

16 Lara chooses a number less than 100

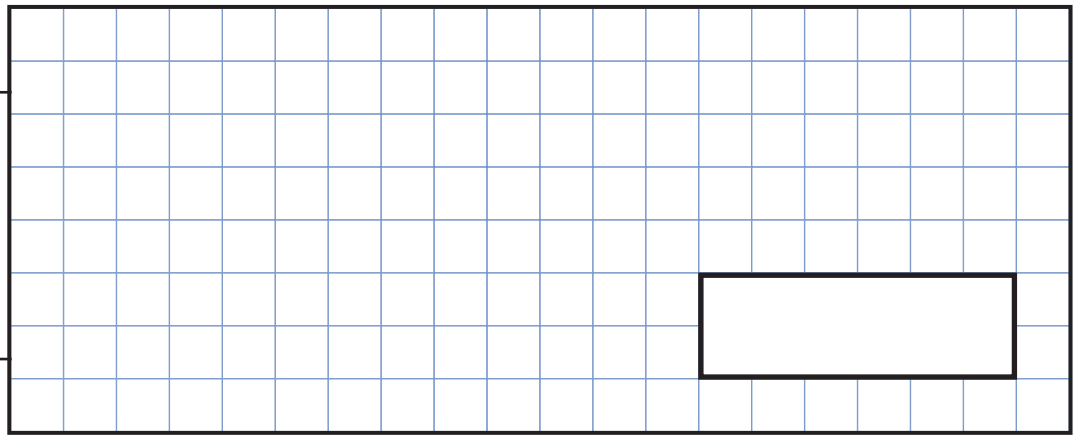
She divides it by 3 and then subtracts 11

She then divides this result by 2

Her answer is 10.5

What was the number she started with?

Show your method



2 marks

17

$$x + 2y = 20$$

x and y are whole numbers **less than 10**

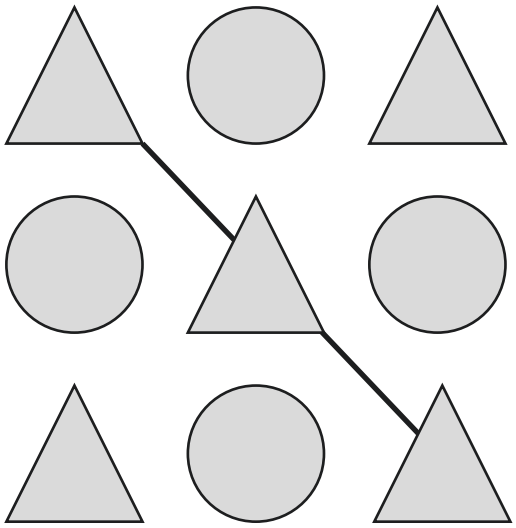
What could x and y be?

$x =$ ☐

$y =$ ☐

1 mark

21

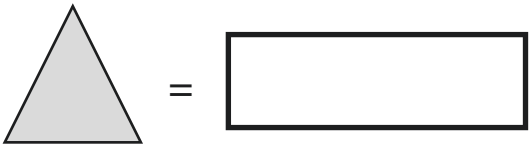


Each shape stands for a number.

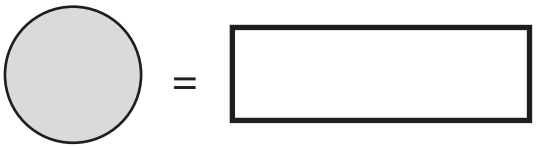
The total of the shapes on the diagonal line is 48

The total of all the shapes is 200

Calculate the value of each shape.



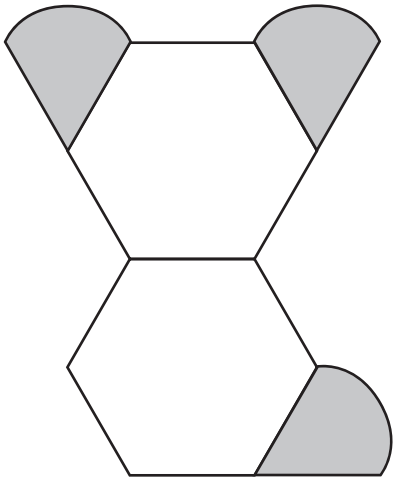
1 mark



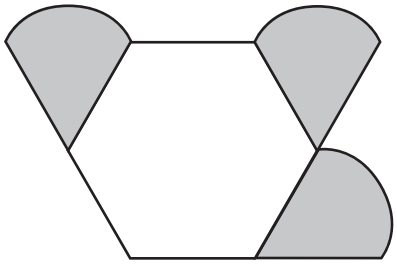
1 mark

21 Amina is making designs with two different shapes.

She gives each shape a value.

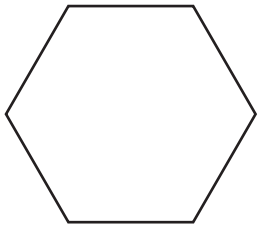


Total value is 147

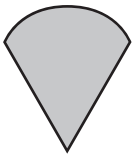


Total value is 111

Calculate the value of each shape.

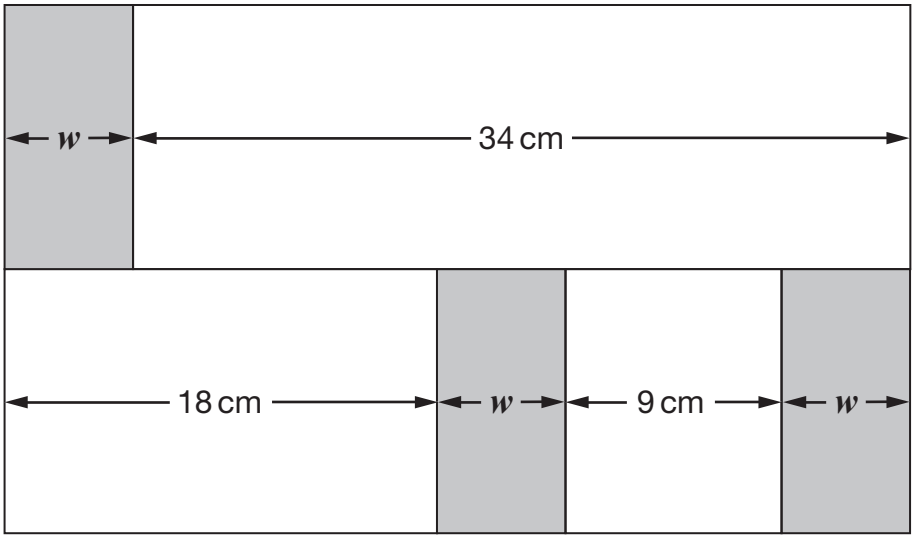
 = ☐

1 mark

 = ☐

1 mark

22 In this diagram, the shaded rectangles are all of equal width (w).



Not to scale

Calculate the width (w) of one shaded rectangle.

Show your method

cm

2 marks

23 Here is a pattern of number pairs.

a	b
1	9
2	19
3	29
4	39

Complete the **rule** for the number pattern.

$b = \square \times a - \square$

1 mark