Q1.

In this sequence, the rule to get the next number is

Multiply by 2, and then add 3

Write the missing numbers.

	25	53	

2 marks

Q2.

The numbers in this sequence increase by 30 each time.

20 50 80 110 ...

The sequence continues in the same way.

Which number in the sequence will be **closest to 300**?

Show your method

2 marks

Q3.

Write the missing numbers so that $2a + 5b = 30$

One is done for you.

$2a + 5b = 30$ when $a = 0$ and $b =$ 6

$2a + 5b = 30$ when $a = 5$ and $b =$ _____

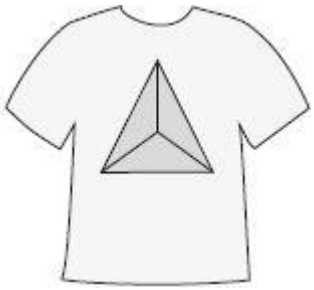
1 mark

$2a + 5b = 30$ when $a = 15$ and $b =$ _____

1 mark

Q4.

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.

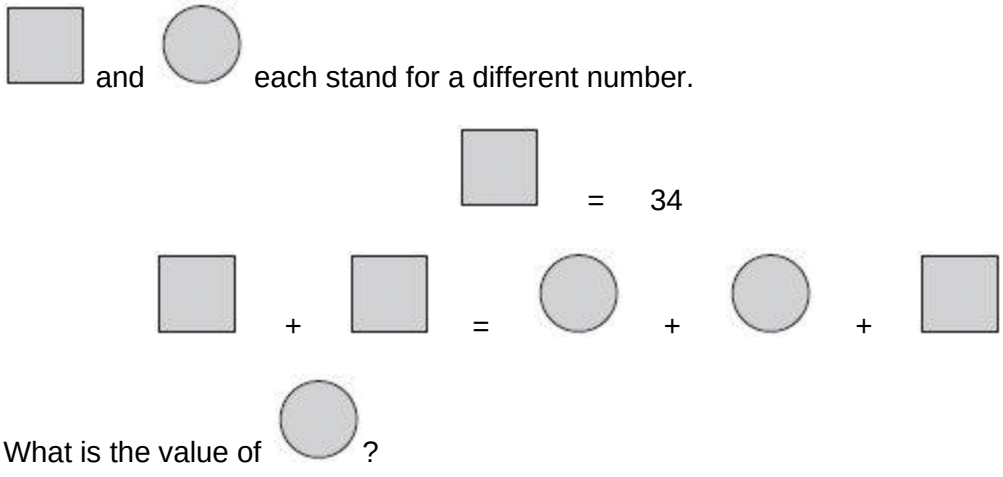
What is the greatest number of **colours** she can have in the design?

Show your method

colours

2 marks

Q5.

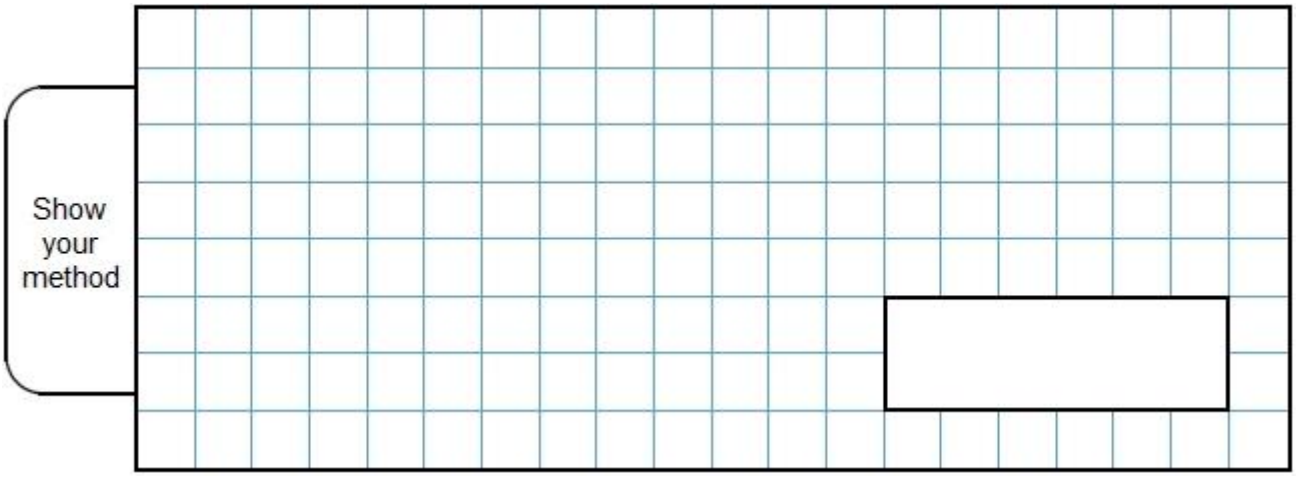


1 mark

Q6.

Find the value of t in this equation.

$$33 - 8t = 15$$



2 marks

Q7.

Find the value of x in this equation.

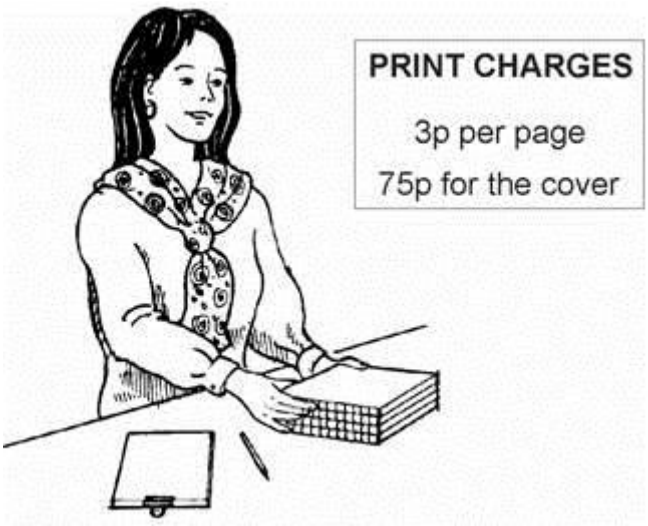
$$6x - 27 = 0$$

Show your method

2 marks

Q8.

Mrs Jones prints books.



Jon pays **£4.35** for his book, **including the cover.**

How many **pages** are in his book?

Show your method

2 marks

Here are the print prices again.

3p per page and 75p for the cover.

Write a formula for the **total cost** of printing a book with cover.

t stands for the total cost in pence.

Use **n** for the number of pages.

t = _____

2 marks

Q9.

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