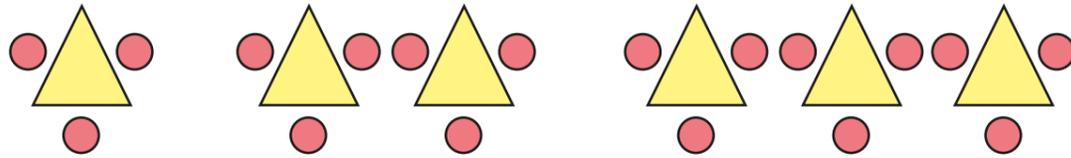


1 Scott builds a pattern using triangles and circles.



a) Draw the next diagram in the pattern.

b) Scott records the number of triangles and circles in a table.

Complete the table.

Number of triangles	1	2	3	4	5
Number of circles	3				

c)  $c$  = number of circles and  $t$  = number of triangles

Circle the formula that describes the pattern.

$c = t + 3$

$c = 3t$

$t = 3c$

$t = 3 + c$

d) How many circles will there be with 10 triangles?

Show your working.

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2 a) Complete the table.

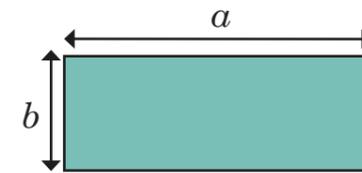
Number of weeks	1	2	3	5	10
Number of days	7				

b) Complete the formula to show the relationship between days ( $d$ ) and weeks ( $w$ ).

$$d = \square w$$

c) How many days are there in 32 weeks?

3 a) Write a formula for the area and perimeter of the rectangle.



area = \_\_\_\_\_

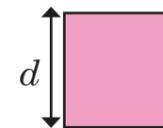
perimeter = \_\_\_\_\_

b) Work out the area and perimeter of the rectangle if  $a = 17$  cm and  $b = 8$  cm

Show your workings.

area =       perimeter =

4 a) Write a formula for the area and perimeter of the square.



area = \_\_\_\_\_

perimeter = \_\_\_\_\_

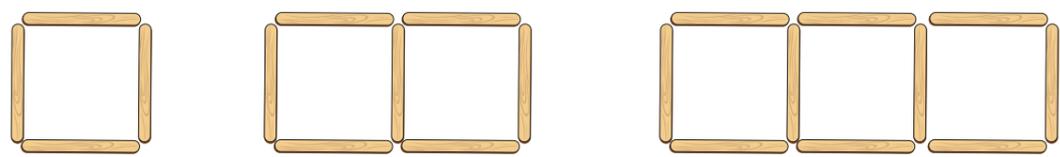
b) Work out the area and perimeter of the square if  $d = 8.5$  cm

Show your workings.

area =       perimeter =



5 Dora makes a square pattern using lolly sticks.

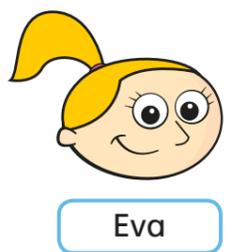


She records the number of squares and sticks in a table.

a) Continue the pattern and complete the table.

Number of squares, $s$	1	2	3	4	5
Number of lolly sticks, $l$	4	7			

b)



You need 35 lolly sticks to make 10 squares. I multiplied the number needed for 2 squares by 5

Show that Eva is wrong.

How many sticks are needed to make 10 squares?

c) Circle the formula that describes the pattern.

$l = 3s + 1$

$l = 4s + 1$

$l = 3(s + 1)$



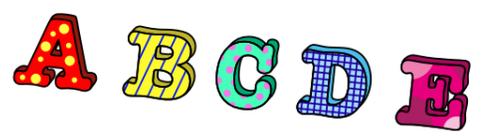
6 Here are a dog walker's prices.

a) How much does the dog walker charge for a 2-hour job?

b) Write a formula to show the cost ( $c$ ) for ( $h$ ) hours.

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7 The Wooden Letter Company sells wooden letters for £2 each, plus £1.50 for delivery of each order.



a) Whitney places an order for the letters to spell out her name. How much does it cost?

£

b) Write a formula to show the cost ( $c$ ) for the number of letters ( $n$ ).

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