

# Test 5: Algebra

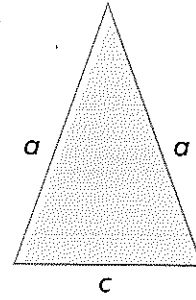
- 1 Tick the **two** expressions that can be used to calculate the perimeter ( $P$ ) of this triangle.

$$P = a + a + c + c \quad \square$$

$$P = a + c \quad \square$$

$$P = 2a + c \quad \square$$

$$P = a + a + c \quad \square$$




1 mark

- 2  $n$  stands for a number.

Write the missing numbers to complete the table.

$n$	$n - 3$
15	
	29

1 mark

- 3 Draw lines to match each equation to the values that  $x$  and  $y$  could be.

$$30 = 20 + x + y$$

$$x = 20, y = 2$$

$$18 + x = 40 - y$$

$$x = 2, y = 8$$

$$40 - x = y$$

$$x = 30, y = 10$$

2 marks

- 4  $k = 3$  and  $m = 9$

- a) Calculate each expression and circle the odd one out.

$$3k - m$$

$$m - 3k$$

$$3m - k$$

$$k + 2m - 21$$

1 mark

- b) Explain why it is the odd one out.

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1 mark

5 a)  $2a + 8 = 30$

What is the value of  $a$ ?  $a =$

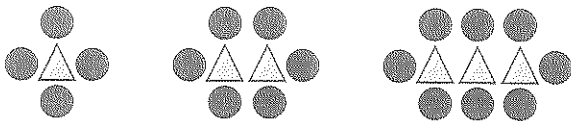
1 mark

b)  $b = 5$

What is  $5b - 25$ ?

1 mark

6 Jacob makes a sequence of patterns from circles and triangles.



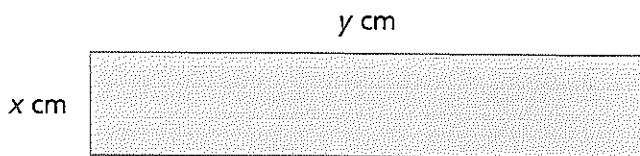
Number of triangles	Number of circles
1	4
2	6
3	8

He thinks that the 10th pattern in the sequence will have 41 circles.  
Explain why Jacob is not correct.

.....  
.....

1 mark

7 This rectangle has an area of  $24\text{cm}^2$ . Both  $x$  and  $y$  are whole numbers less than 10.



Write two possible values for  $x$  and  $y$ .

$x =$   cm  $y =$   cm and  $x =$   cm  $y =$   cm

1 mark

Total marks ..... Time taken .....