

Algebra KS2 SATS Standard Worksheet

1. What is the value of $4x + 7$ when $x = 5$?

1 mark

2.  and  each stand for a different number.

$$\square = 34$$

$$\square + \square = \bigcirc + \bigcirc + \square$$

What is the value of  ?

1 mark

3. n stands for a number.

Complete this table of values.

n	$5n - 2$
20	<input style="width: 50px; height: 25px;" type="text"/>
<input style="width: 50px; height: 25px;" type="text"/>	38

2 marks

4. The rule for this sequence of numbers is 'add 3 each time'.

1 4 7 10 13 16 ...

The sequence continues in the same way.

Mary says,

'No matter how far you go there will never be a multiple of 3 in the sequence'.

Is she correct?

Circle Yes or No.

 **Yes / No**

Explain how you know.

.....

1 mark

5. k stands for a whole number.

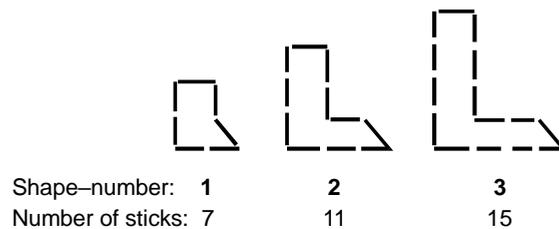
$k + 7$ is greater than 100

$k - 7$ is less than 90

Find **all** the numbers that k could be.

2 marks

6. Ann makes a pattern of L shapes with sticks.



Ann says : ***“I find the number of sticks for a shape by first multiplying the shape-number by 4, then adding 3”.***

Work out the **number** of sticks for the shape that has shape-number **10**.

1 mark

Ann uses **59 sticks** to make another L shape in this pattern.

What is its shape-number?

2 marks

Here is Ann's rule again:

“I find the number of sticks for a shape by first multiplying the shape-number by 4, then adding 3”.

Write a formula to work out the number of sticks for any L shape.

Use **S** for the number of **sticks** and **N** for the **shape-number**.

S =

2 marks

7. **p** and **q** each stand for whole numbers.

$$p + q = 1000$$

p is 150 **greater** than **q**.

Calculate the numbers **p** and **q**.

✎

Show your **method**.
You may get a mark.

p =

q =

2 marks

8. **n** stands for number.

Match the equivalent expressions.

One has been done for you.

n plus 5		n ²
		2 - n
2 less than n	n + 5	2n
		n - 2
n plus n		n + 2

2 marks

9. Here are some picture frame sizes.

height in cm	10	12	14	16
length in cm	16	20	24	28

For each frame, the length is **twice** the height, **subtract 4**.

What is the **length** of a frame which has a **height** of **36cm**?



2 marks

For each frame, the length (**L**) is **twice** the height (**H**), **subtract 4**.

Write this in symbols.

$$L =$$

2 marks

A **new** frame has its length **twice** its height.
It is made with 126cm of wood.

What is the **length** of this frame?



2 marks