2018 national curriculum tests

Key stage 2

MATHEMATICS

Modified large print

Paper 3: reasoning

First name _____

Middle name _____

Last name _____

Date of birth Day _____ Month _____ Year _____

School name _____

DfE number _____

Note to markers:

This paper should be marked using the modified large print amendments to the mark schemes – MLP with the standard mark schemes for KS2 Mathematics: Paper 3.

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Instructions

You must not use a calculator to answer any questions in this test.

Questions and answers

You will have 40 minutes to complete this test, plus your additional time allowance.

Follow the instructions for each question.

Work as quickly and as carefully as you can.

If you need to do working out, you can use any space on the page.

Some questions say, 'Show your method'.
For these questions you may get a mark for showing your method.

If you cannot do a question, go on to the next one.
You can come back to it later, if you have time.

If you finish before the end, go back and check your work.

1. **Look at the sequence below.**

_____ 42 49 _____ 63 _____

The numbers in this sequence increase by the same amount each time.

Write the missing numbers in the spaces.

2. Adam chooses the colours for a new team shirt.

The shirt has two colours.

There are four colours to choose from: yellow, blue, white and red.

There are six different combinations.

The shirt could be

yellow and blue

yellow and white

yellow and red

blue and white.

Write the other two combinations.

_____ and _____

_____ and _____

3. **Look at the four number cards below.**

2	3	4	7

Layla uses each card once to make a four-digit number.

She places

4 **in the tens column**

2 **so that it has a higher value than any of the other digits.**

She places the remaining two digits so that **7** **has the higher value.**

Write a digit in each box below to show Layla's number.

4. The numbers 532_ and _069 both have four digits.

Look at the addition below.

532___ + 748 = ___069

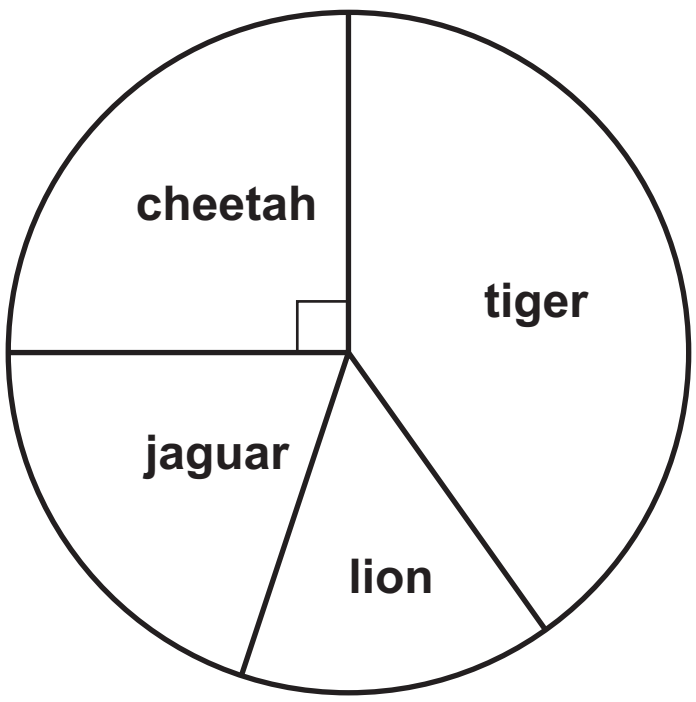
Write the missing digit on each line to make this addition correct.

5. Look at the five numbers below.

2 3 6 9 12

Write the numbers that are common factors of both 12 and 18

6. **The chart below shows the number of different types of big cat in a zoo.**



There are 20 big cats in the zoo altogether.

Look at the four statements about the chart, below.

There are more cheetahs than jaguars. ☐

The total number of lions and tigers is 10 ☐

One-quarter of the big cats are cheetahs. ☐

There are more than 5 jaguars. ☐

Tick the statements that are true.

7. **A farmer is packing eggs.**

Each box holds six eggs.

The farmer has 980 eggs to pack.

How many boxes can the farmer fill using 980 eggs?

_____ full boxes

How many eggs will be left over?

_____ left over

8. Jack has £400

He spends 35% of his money on a new bike.

How much does Jack spend on his new bike?

£ _____

9. The Angel of the North is a large statue in England.

It is 20 metres tall and 54 metres wide.

Ally makes a scale model of the Angel of the North.

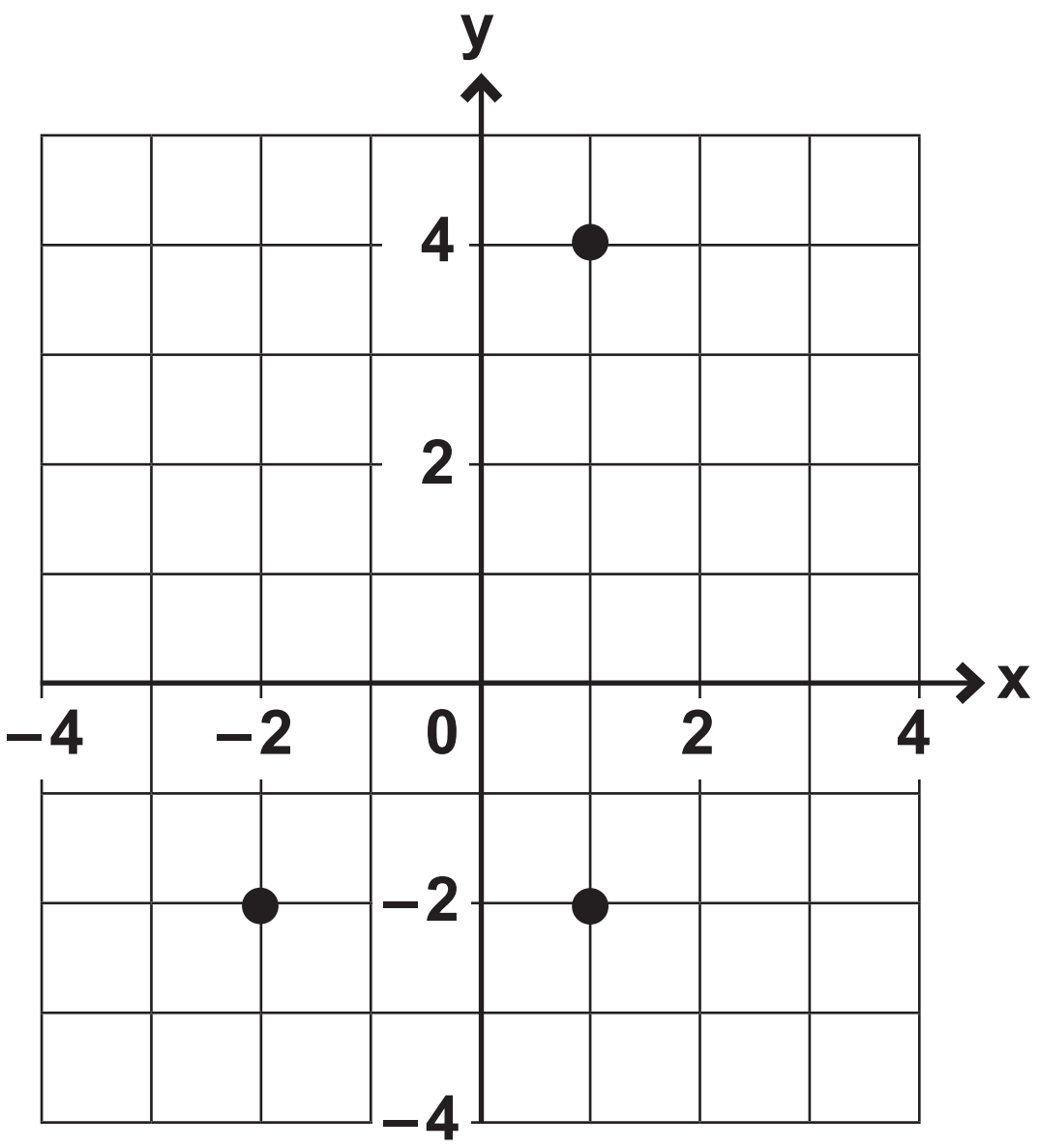
Her model is 40 centimetres tall.

How wide is her model?

_____ cm

10. **Layla draws a rectangle on the coordinate grid below.**

Three of the vertices are marked.



What are the coordinates of the missing vertex?

(,)

11. Stefan has **600** millilitres of water in a bottle.

He pours **130 ml** into one jug.

He pours **155 ml** into another jug.

How many millilitres of water are left in Stefan's bottle?

Show your method.

_____ ml

12. **The table below shows the areas of the United Kingdom and Jamaica.**

Country	Area (square kilometres)
United Kingdom	240 000
Jamaica	10 000

The area of the United Kingdom is larger than the area of Jamaica.

How many times larger is the United Kingdom?

_____ times larger

13. A box contains $2 \cdot 6$ kg of washing powder.

Jack uses 65 grams of powder for each wash.

He uses all the powder.

How many washes did Jack do?

Show your method.

_____ washes

14. Two of the angles in a triangle are $70°$ and $40°$

Jack says that the triangle is equilateral.

Explain why Jack is not correct.

15. **A shop prints designs on T-shirts.**

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

$$\text{price} = 60\text{p} \times \text{number of colours} + £1{\cdot}25$$

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

£ _____

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**

16. A book has 276 pages.

Amina has read $\frac{1}{3}$ of the book.

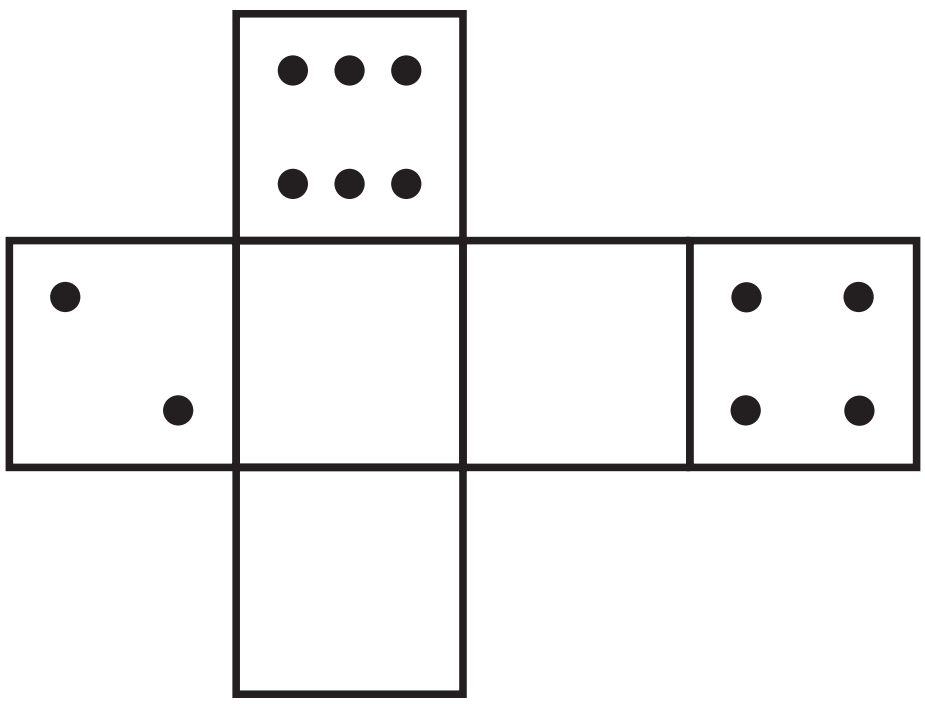
How many pages are left for Amina to read?

Show your method.

_____ pages

17. **On a dice, the sum of the dots on opposite faces is always 7**

Draw dots on the three empty faces of the net below so that it could fold up to make a dice.



18. **A vegetable garden is planted with potatoes, cabbages and carrots.**

$\frac{2}{3}$ **of the area is planted with potatoes.**

$\frac{1}{4}$ **of the area is planted with cabbages.**

The remaining area is planted with carrots.

What fraction of the garden is planted with carrots?

Show your method.

19. **Look at the multiplication below.**

33 630 = 354 × 95

Use this multiplication to complete the three calculations below.

354 × 9·5 = _____

3 540 × 95 = _____

3 363 ÷ 95 = _____

20. In March, Ken collects 2 or 3 or 4 eggs each day from his hens.

In the first 20 days, Ken collects 57 eggs altogether.

There are 31 days in March.

What is the greatest number of eggs Ken can collect in March?

Show your method.

_____ eggs

21. Jack finished a sponsored run in **53** minutes **25** seconds.

Ally finished **3** minutes **50** seconds **after** Jack.

How long did Ally take?

_____ min _____ sec

Layla finished the run **8** minutes **45** seconds **before** Jack.

How long did Layla take?

_____ min _____ sec

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Standards & Testing Agency

2018 key stage 2 mathematics
Paper 3: reasoning
Print version product code: STA/18/7975/MLp ISBN: 978-1-78644-670-1
Electronic PDF version product code: STA/18/7975/MIe ISBN: 978-1-78644-792-0

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STA/18/7975/MLp ISBN 978-1-78644-670-1