2019 national curriculum tests

Key stage 2

Mathematics

Paper 3: reasoning

MODIFIED LARGE PRINT

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 standard mark schemes for KS2 Mathematics: Paper 3. There is additional guidance on marking some questions in this paper in the Key stage 2 Mathematics amendments to mark schemes – MLP document.

STA/19/8218/MLe_24pt

Instructions

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

Questions and answers

You 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. The original price of a car is £8 999

In a sale there is £1 100 off the original price.

What is the sale price of the car?

£ _____

2. **Look at this number.**

3 576 219

Which digit is in the ten thousands place?

_____

Round 3 576 219 to the nearest million.

_____

3. Dev had £10

He gave some money away.

p is the amount of money, in pounds, that Dev gave away.

Look at the five expressions below.

$10 + p$

$10 \div p$

$p - 10$

$10 - p$

$p \times 10$

Write the expression that shows how much money Dev has left.

4. **Look at the four masses below.**

1·25 kg

0·99 kg

1·025 kg

0·009 kg

Write the masses in order, starting with the lightest.

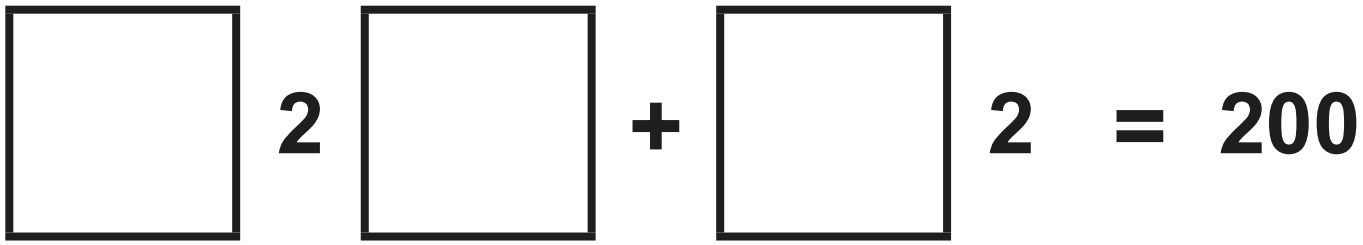
_____ **lightest**

_____

_____

_____

5. Look at the addition below.



Write the missing digits in the three boxes to make this addition correct.

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6. John buys one toy car and one pack of stickers.

The toy car costs £1·49

The pack of stickers costs £1·64

He pays with a £10 note.

How much change does John get?

Show your method.

£ _____

7. **The list below shows the masses of eight kittens.**

305 g 375 g 310 g 255 g

275 g 410 g 360 g 345 g

What is the difference in mass between the heaviest kitten and the lightest kitten?

_____ g

The masses of the kittens are to be put in four groups.

Write the missing numbers in the table below.

One has been done for you.

Mass in g	Number of kittens
250 – 299	
300 – 349	
350 – 399	
400 – 449	1

8. Ken is playing a game.

He has **4 289** points.

Then he scores another **355** points.

Ken's target is **6 000** points.

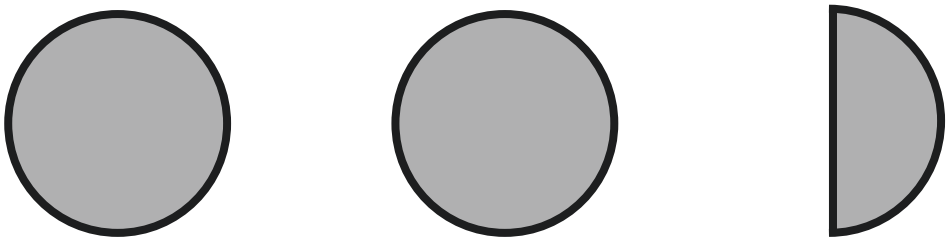
How many **more** points does Ken need to reach his target?

Show your method.

9. **The pictogram below shows the number of satellites above the Earth in 2016.**

Each circle represents 1 000 satellites.

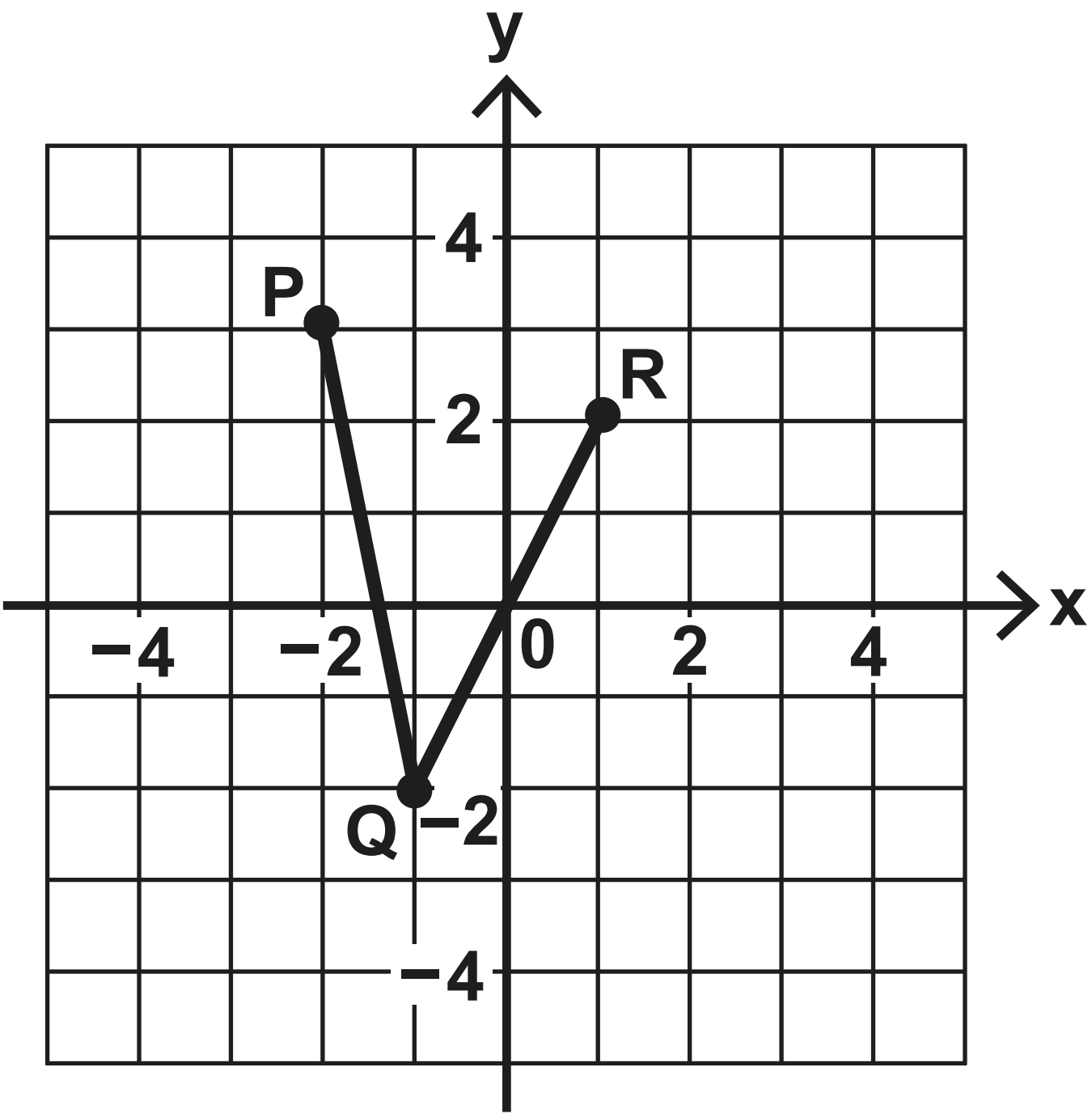
Number of satellites in 2016



How many satellites were above the Earth in 2016?

_____

10. Look at the grid below.



Three points **P** **Q** and **R** are joined by two lines.

Lara plots another point **S** on the grid.
The coordinates of **S** are **(−1, 2)**

She joins the points to make a quadrilateral **PQRS**.

a) Mark point **S** on the grid.

b) Lara then translates the quadrilateral **4** squares to the right.

Write the new coordinates of point **P**.

(_____ , _____)

11. **In this question, you may use the numbers more than once.**

Look at the five numbers below.

2 3 4 5 6

Write the prime numbers from the list.
One has been done for you.

2 _____

Write the factors of 12 from the list.
One has been done for you.

2 _____

Write the factors of 15 from the list.

12. Amina's bed is **190 cm** in length and **91 cm** in width.

She is making a one–tenth scale model of the bed.

What are the length and width of Amina's model?

length = _____ cm

width = _____ cm

13. **Kirsty says that when you double the size of an acute angle, you always get an obtuse angle.**

Explain why Kirsty is not correct.

14. How many days are there in September, October and November altogether?

_____ days

15. **The International Space Station orbits the Earth at a height of 250 miles.**

What is the height of the International Space Station in kilometres?

Use 8 kilometres equals 5 miles.

_____ **km**

16. Potatoes cost £1·50 per kg.

Carrots cost £1·80 per kg.

Jack buys $1\frac{1}{2}$ kg of potatoes

and $\frac{1}{2}$ kg of carrots.

Work out how much change he gets from £5

Show your method.

£ _____

17. $x + 2y = 20$

x and y are whole numbers less than 10

What could x and y be?

x = _____

y = _____

18. Look at the five fractions below.

$$\frac{1}{2} \qquad \frac{2}{8} \qquad \frac{3}{4} \qquad \frac{7}{16} \qquad \frac{24}{32}$$

Tick or mark the fractions less than $\frac{5}{8}$

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19. **Layla makes jewellery to sell at a school fair.**

Each bracelet has 53 beads.

She makes 68 bracelets.

Each necklace has 105 beads.

She makes 34 necklaces.

How many beads does Layla use altogether?

Show your method.

_____ beads

20. **Adam is making booklets.**

Each booklet must have 34 sheets of paper.

He has 2 packets of paper.

There are 500 sheets of paper in each packet.

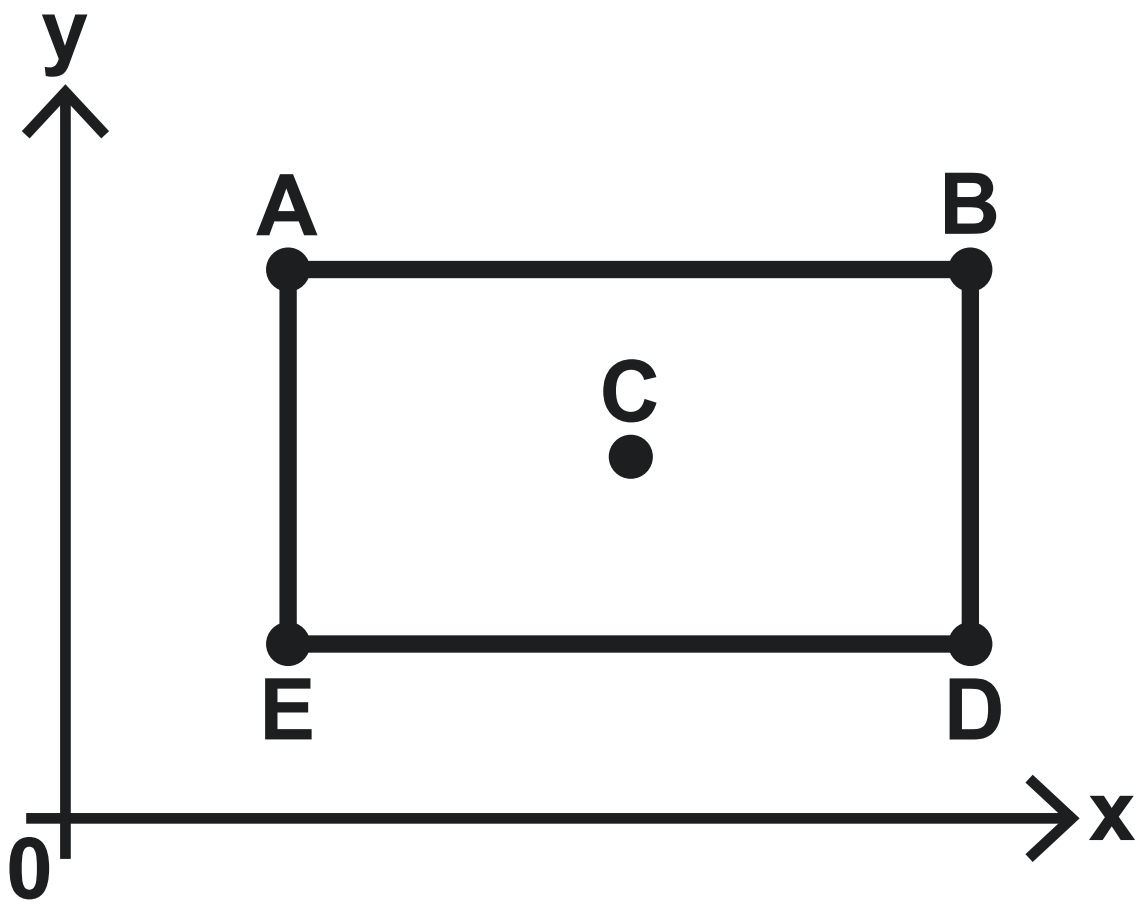
How many complete booklets can Adam make from 2 packets of paper?

Show your method.

_____ **booklets**

21. Look at the diagram below.

It is not to scale.



ABDE is a rectangle on coordinate axes.

The sides of the rectangle are parallel to the axes.

The coordinates of **A** are **(25, 30)**

The coordinates of **C** are **(40, 22)**

Point **C** is the centre of the rectangle.

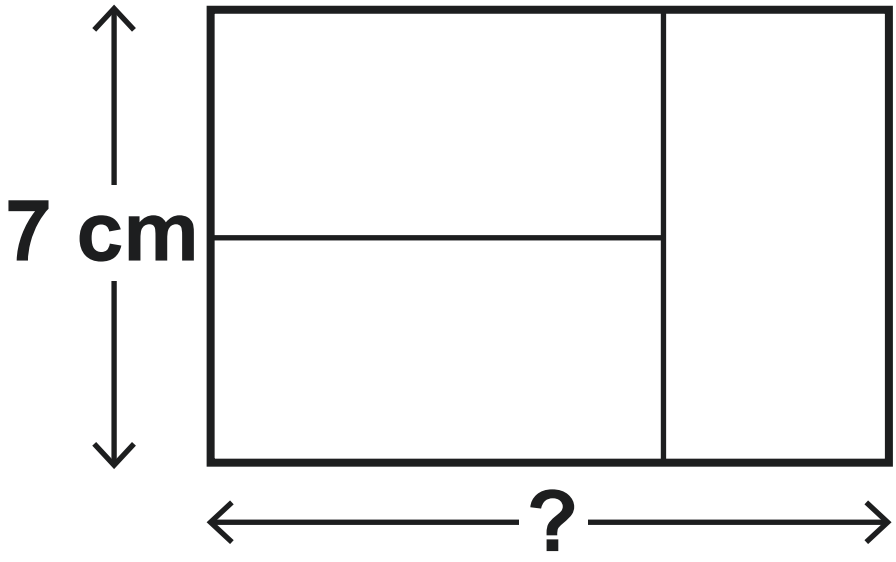
Work out the coordinates of **B** and **D**.

B is (_____ , _____)

D is (_____ , _____)

22. **Look at the diagram below.**

It is not actual size.



Three identical rectangles are arranged to make a larger rectangle.

The width of the larger rectangle is 7 cm.

Calculate the length of the larger rectangle.

_____ cm

23. **Look at the diagram below.**

It is not to scale.

The distance from point P to point R is 800 metres.

The distance from point P to point Q is 4 times the distance from point Q to point R.

Olivia says that it is 600 metres from point P to point Q.

Explain why Olivia is not correct.

End of test

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