

# 2022 national curriculum tests

## Key stage 2

# MATHEMATICS

## Modified large print

## Paper 2: 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 2.

# BLANK PAGE

# 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. Look at the five numbers below.

**9 206 499**

**9 215 300**

**9 206 504**

**9 215 298**

**9 206 909**

Tick or mark the greatest number.

2. One table can seat **8** people.

How many tables are needed to seat **40** people?

\_\_\_\_\_ tables

3. Write the missing number in the box to make the addition below correct.

$$400\ 000 + \boxed{\phantom{000000}} + 70 = 430\ 070$$

**4. Children estimated the number of beans in a jar.**

**The estimates of five children are shown in the table below.**

<b>Amir</b>	<b>1 310</b>
<b>Olivia</b>	<b>1 220</b>
<b>Emma</b>	<b>1 400</b>
<b>John</b>	<b>1 290</b>
<b>Chen</b>	<b>1 460</b>

**The exact number of beans in the jar was 1 380**

**Whose estimate was closest to the exact number?**

---

**Whose estimate was furthest from the exact number?**

---

5. One tonne is **1 000** kilograms.

A truck can carry a load of **2·3** tonnes.

How many kilograms can the truck carry?

\_\_\_\_\_ kg

6. Emma has a **5** litre bag of compost.

She uses **2·75** litres.

How much compost does Emma have left?

\_\_\_\_\_ litres

7. In a race, Ali completes a swim, a run and a bicycle ride.

The swim is  $\frac{1}{10}$  of the total distance.

The run is  $\frac{3}{10}$  of the total distance.

What fraction of the total distance is the bicycle ride?

---

8. Look at the five fractions below.

$$\frac{5}{8}$$

$$\frac{14}{8}$$

$$\frac{19}{8}$$

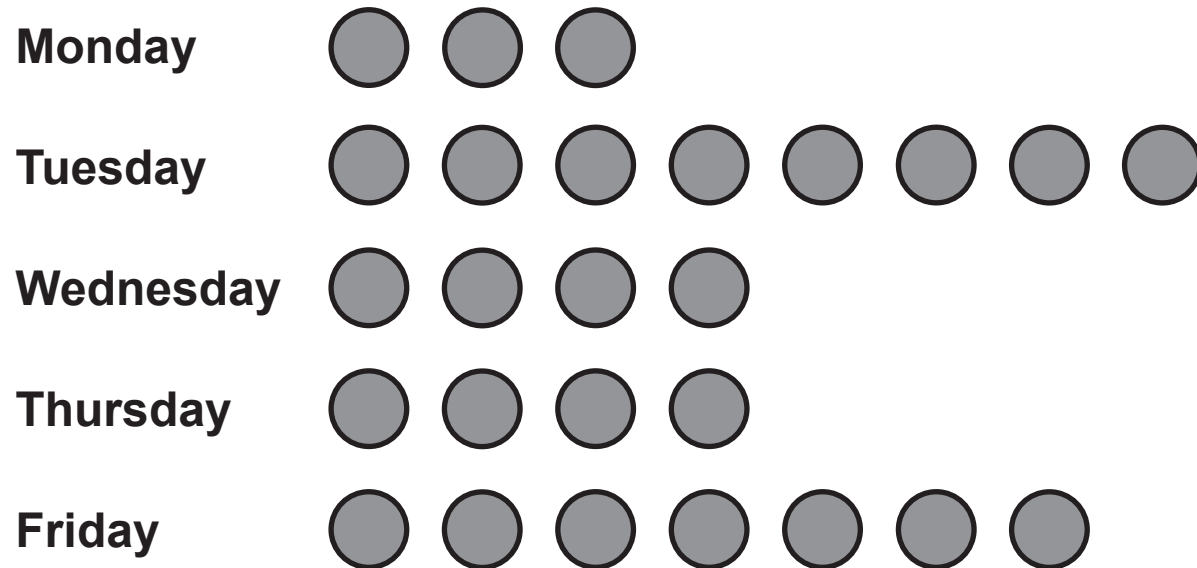
$$\frac{23}{8}$$

$$\frac{26}{8}$$

Tick or mark the improper fraction that is equivalent to  $2\frac{3}{8}$



9. The pictogram below shows how many DVDs a shop sells in one week.



On Monday **24** DVDs were sold.

How many DVDs were sold on Friday?

---

**10. A shop has an offer on cereal:**

**Buy one box for £1·90**

**Get the second box half price.**

**Ali buys two boxes of cereal.**

**How much must he pay altogether?**

**Show your method.**

**£** \_\_\_\_\_

11. a) Write the missing value in the box.

$$\frac{3}{10} = \frac{\boxed{\phantom{000}}}{20}$$

b) Write the missing value in the box.

$$\frac{12}{15} = \frac{4}{\boxed{\phantom{000}}}$$

12. William has four parcels.

Their masses are shown below.

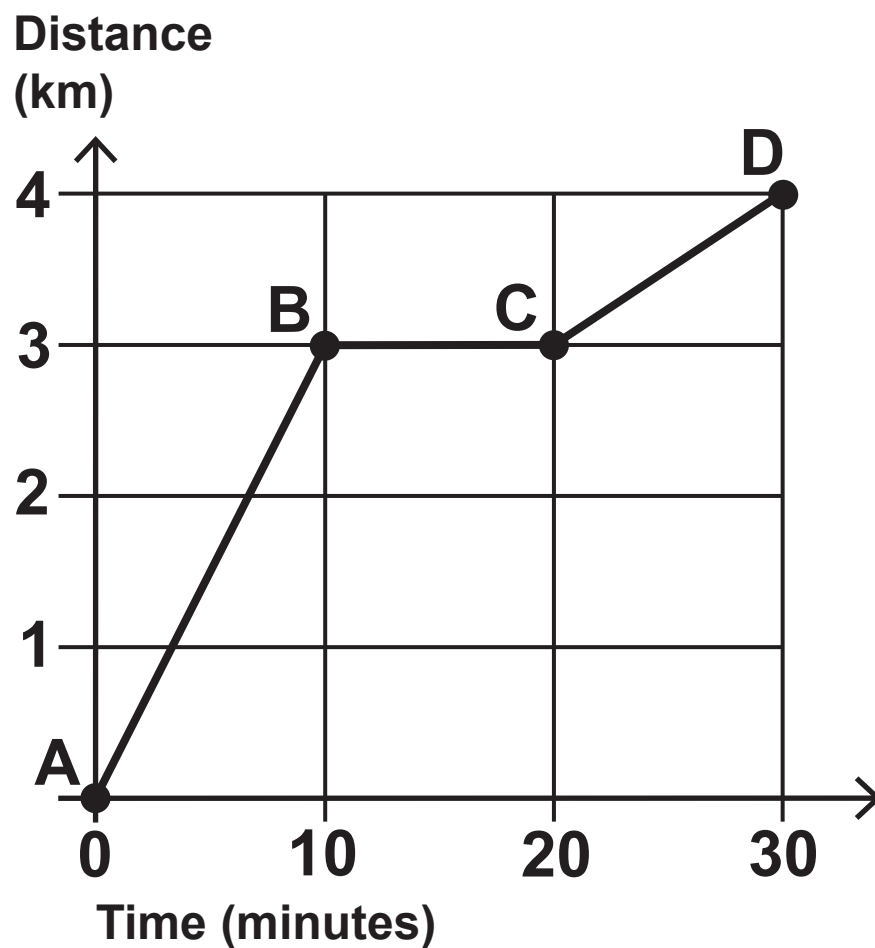
1.4 kg      1 500 g      2 kg      300 g

Write the masses in order, starting with the **heaviest**.

---

heaviest

13. Look at the graph below that shows Dev's bike ride.



Look at the diagram below.

**A to B**

Dev rests for **10** minutes.

**B to C**

Dev cycles **3 km** in **10** minutes.

**C to D**

Dev cycles **1 km** in **10** minutes.

Draw lines to match each part of Dev's journey to the correct sentence.

14. One **850 ml** bottle of squash makes **17** drinks.

How many millilitres of squash are in each drink?

\_\_\_\_\_ ml

15. Look at the three signs below.

**=      >      <**

Write the sign that should be put in the box to make each of the four statements below correct.

- |    |                            |                      |                            |
|----|----------------------------|----------------------|----------------------------|
| a) | <b>1   ×   2   ×   3</b>   | <input type="text"/> | <b>1   +   2   +   3</b>   |
| b) | <b>2   ×   2   ×   2</b>   | <input type="text"/> | <b>2   +   2   +   2</b>   |
| c) | <b>1   ×   10   ×   10</b> | <input type="text"/> | <b>1   +   10   +   10</b> |
| d) | <b>0   ×   10   ×   10</b> | <input type="text"/> | <b>0   +   10   +   10</b> |

16. Look at the five numbers below.

**28.07**

**28.65**

**28.71**

**28.75**

**28.97**

Tick or mark the numbers that round to **28.7**

17. **6** divides into **40** with a remainder of **4**

Write one other number that divides into **40** with a remainder of **4**

---

18. The sign below shows the number of empty spaces on each level of a car park at **10 am**.

Empty Spaces	
Level 2	511
Level 1	268

In this car park, each level has **800** spaces.

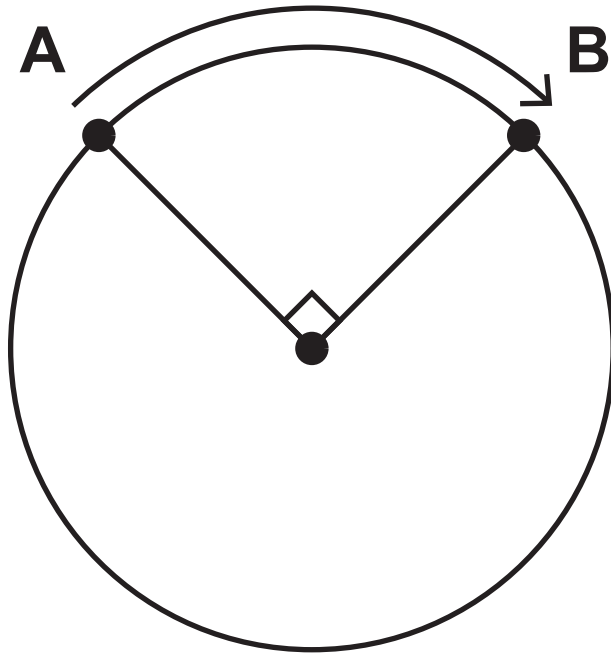
What is the total number of cars parked in the car park at **10 am**?

Show your method.

---

19. Look at the circle below.

It is not actual size.



The circumference of the circle is **60** centimetres.

What is the distance around the edge of the circle from **A** to **B**?

\_\_\_\_\_ cm



20. There are **432** places at a dance school.

There are two age groups.

The table below shows the number of classes and the number of pupils in each class for each age group at the moment.

Age in years	Number of classes	Number of pupils in each class
<b>7–12</b>	<b>15</b>	<b>16</b>
<b>13–18</b>	<b>10</b>	<b>18</b>

How many more pupils can join the dance school?

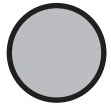
Show your method.

---

## 21. In this question



stands for a number



stands for a different number

a) Look at the addition below.

$$\triangle + \triangle + \triangle = 48$$

Work out the value of 

$$\triangle = \underline{\hspace{4cm}}$$

b) Look at the addition below.

$$\bigcirc + \triangle + \bigcirc + \triangle = 92$$

Work out the value of 

$$\bigcirc = \underline{\hspace{2cm}}$$

**22. You can make green paint by mixing:**

**250 ml** of blue paint

**1 150 ml** of yellow paint.

**Stefan wants to make some of this green paint.**

**He uses 750 ml** of blue paint.

**How much green paint does he make?**

**Show your method.**

\_\_\_\_\_ ml

23. Adam has a bag of fruit that weighs **1·25** kilograms.

He takes out a banana.

Now the bag of fruit weighs **1·1** kg.

Next, he takes out an orange.

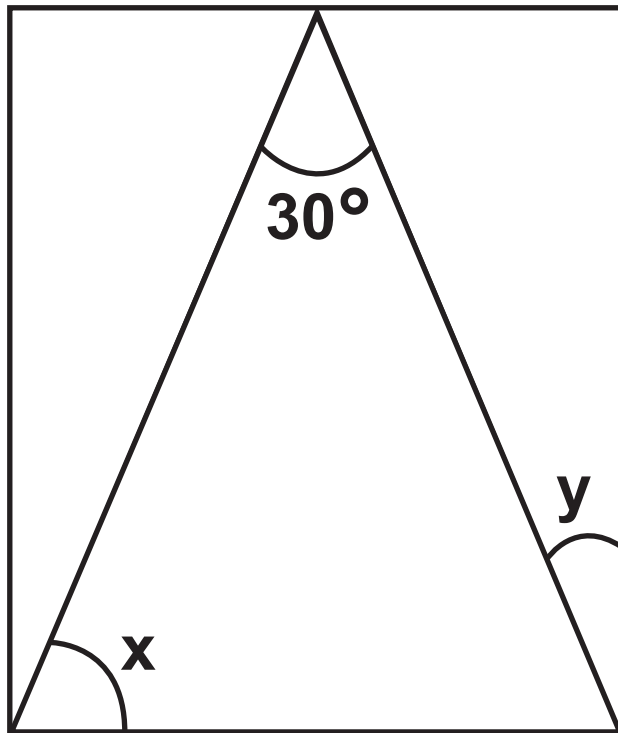
Now the bag weighs **920** g.

How much **more** does the orange weigh than the banana?

Show your method.

\_\_\_\_\_ **g**

24. Look at the diagram below.  
It is not to scale.

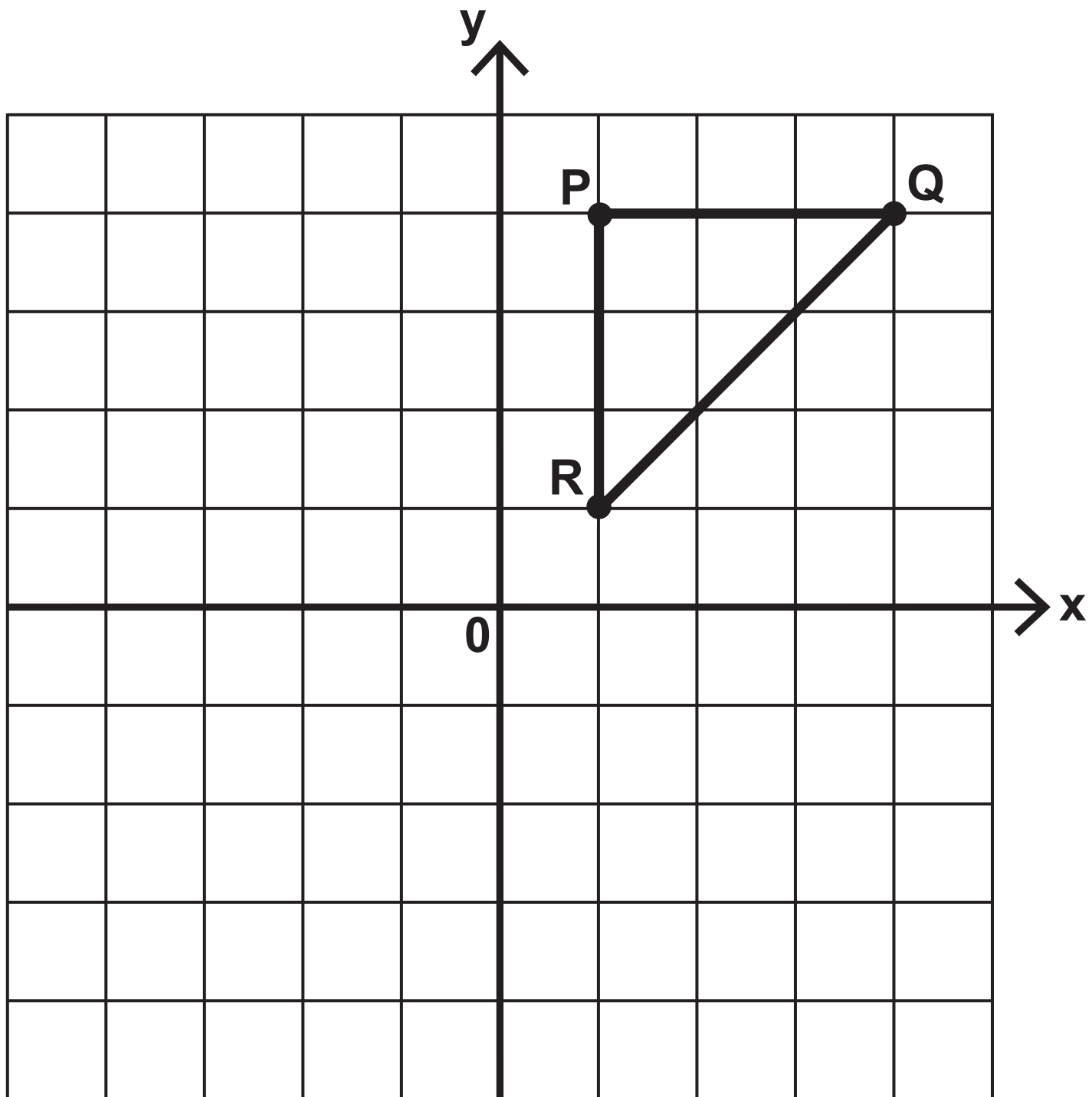


An isosceles triangle is drawn inside a rectangle.  
Calculate the sizes of angles **x** and **y**.  
Show your method.

**x** = \_\_\_\_\_ °

**y** = \_\_\_\_\_ °

25. Look at the diagram below.



Triangle PQR is drawn on a coordinate grid.

Each square of the grid is **1** unit.

The triangle is translated **6** units down.

Mark the point **A** that point **Q** moves to.

The new triangle is then reflected in the y-axis.

Mark the point **X** that point **A** moves to.

**END OF TEST**



Standards  
& Testing  
Agency

2022 key stage 2 mathematics

Paper 2: reasoning

Print version product code: STA/22/8418/MLp ISBN: 978-1-78957-309-1

Electronic PDF version product code: STA/22/8418/MLe ISBN: 978-1-78957-323-7

### For more copies

Additional copies of this modified large print test paper can be ordered by contacting the national curriculum helpline on 0300 303 3013

© Crown copyright 2022

### Re-use of Crown copyright in test materials

Subject to the exceptions listed below, the test materials on this website are Crown copyright and you may re-use them (not including logos) free of charge in any format or medium in accordance with the terms of the Open Government Licence v3.0 which can be found on the National Archives website and accessed via the following link: [www.nationalarchives.gov.uk/doc/open-government-licence](http://www.nationalarchives.gov.uk/doc/open-government-licence). When you use this information under the Open Government Licence v3.0, you should include the following attribution: 'Contains material developed by the Standards and Testing Agency for 2022 national curriculum assessments and licensed under Open Government Licence v3.0' and where possible provide a link to the licence.



### Exceptions – third-party copyright content in test materials

You must obtain permission from the relevant copyright owners, as listed in the '2022 key stage 2 tests copyright report', for re-use of any third-party copyright content which we have identified in the test materials, as listed below. Alternatively, you should remove the unlicensed third-party copyright content and/or replace it with appropriately licensed material.

### Third-party content

These materials contain no third-party copyright content.

If you have any queries regarding these test materials, contact the national curriculum assessments helpline on 0300 303 3013 or email [assessments@education.gov.uk](mailto:assessments@education.gov.uk).