

Year 6 Practice National Curriculum tests

Set A

Mathematics

Paper 3: reasoning

First Name						
Middle Name						
Last Name						
Date of Birth	Day		Month		Year	

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Total Marks (out of 35)	
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Instructions

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

Questions and answers

You have **40 minutes** to complete this test.

Follow the instructions for each question.

Work as quickly and carefully as you can.

If you need to do working out, you can use the space around the question.

Some questions have a method box like this:

Diagram illustrating a method box. The box is a grid of 20 columns and 10 rows of red lines. On the left side, there is a rounded rectangular box containing the text "Show your method". On the right side of the grid, there is a smaller, empty rectangular box.

For these question, 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**.

Marks

The number under each box at the side of the page tells you the maximum number of marks for each question.

1 The numbers in this sequence increase by 21 each time.

Write the missing numbers.

102 123 165 186

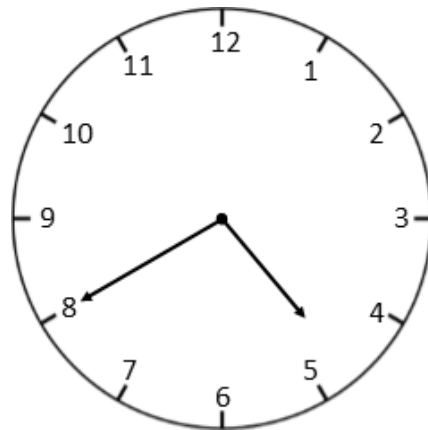
_____ 2 marks

2 Complete the table.

Roman Numerals	Number
XIV	14
XXVI	
XCV	

_____ 2 marks

3 This was the time when Eve went to the park.



She got home **half an hour later**.

What time did she get home?

_____ 1 mark

4

Write the missing numbers.

$$65 + 75 = 200 - \boxed{}$$

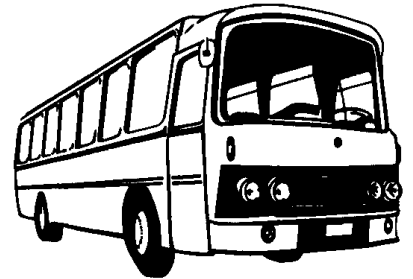
1 mark

$$40 \times 9 = \boxed{} \times 90$$

1 mark

5 Here is part of the bus timetable from Stratford to Banbury.

Stratford	11:32	12:05	12:38	13:11	13:44
Loxley	11:46	12:19	12:52	13:25	13:58
Kineton	11:58	12:31	13:04	13:37	14:10
Wroxton	12:13	12:46	13:19	13:52	14:25
Banbury	12:19	12:52	13:25	13:58	14:31

How long does it take for the bus to travel from **Stratford to Banbury**?
 minutes

1 mark

Adam lives in Loxley. He needs to get to **Banbury by 2:00pm**.

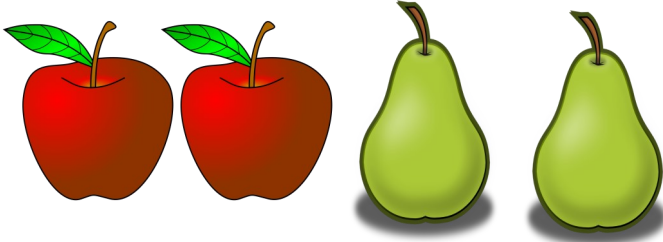
What time is the latest bus he can catch from Loxley?

 :

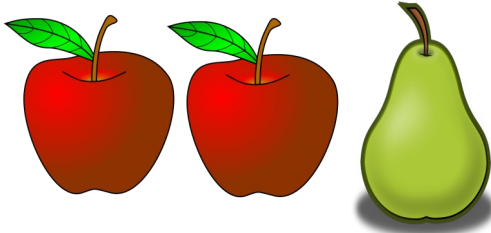
1 mark

6

2 apples and 2 pears costs £1.60

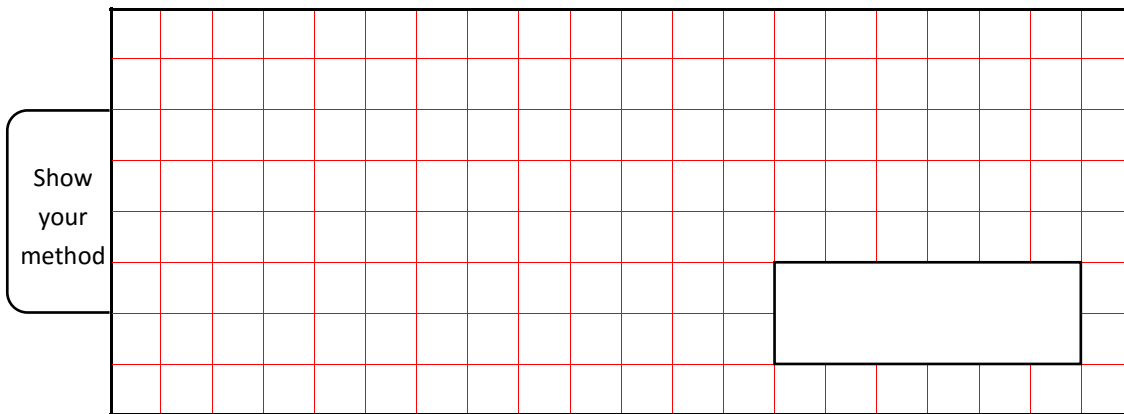


2 apples and one pear costs £1.18



How much would it cost to buy **one apple**?

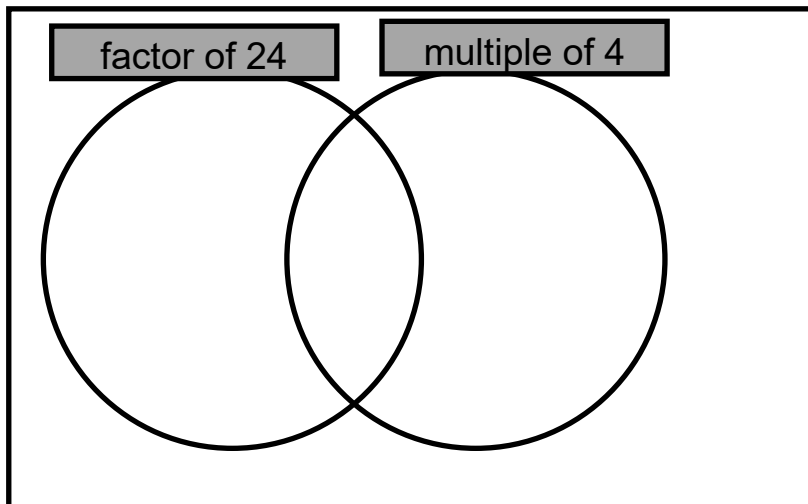
Show your method



2 marks

7

Write each of these numbers in its correct place on the Venn diagram.



6

8

14

16

2 marks

8

Write these numbers in order, starting with the **smallest**.

0.24

0.402

0.042

2.04

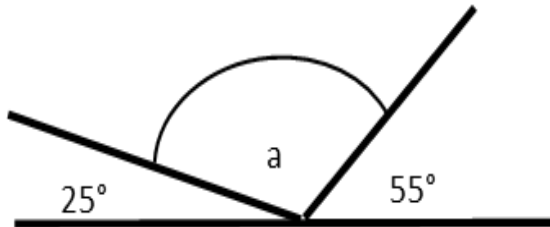
0.204

smallest

1 mark

9

Calculate the size of angle a.



Do not measure - not to scale

1 mark

10

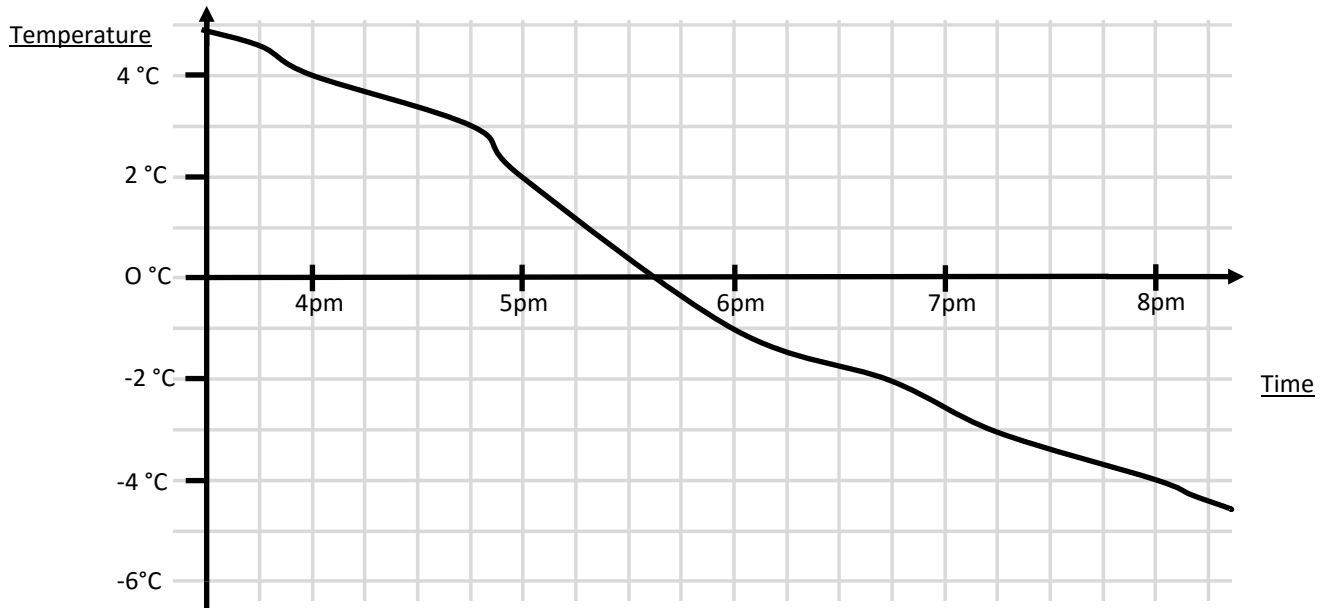
Complete the table.

	rounded to the nearest 10	rounded to the nearest whole number
148.53	150	
6.48		

2 marks

11

The graph shows the temperature on a winter evening in Loxley.



What was the temperature at 6:00 pm?

 °C

1 mark

What was the time when the temperature reached -3°C ?

 : pm

1 mark

- 12 The children of Tysoe School all play one sport on a Thursday afternoon. They can choose to play **rounders** or **football**. There are **120** children in the school. **34** girls choose football.



Write all this information in the table. Then complete the table.

	boys	girls	Total
rounders	25		
football			70
Total			

2 marks

- 13 The **area** of this rectangle is 24 cm^2



Calculate the **perimeter** of the rectangle.

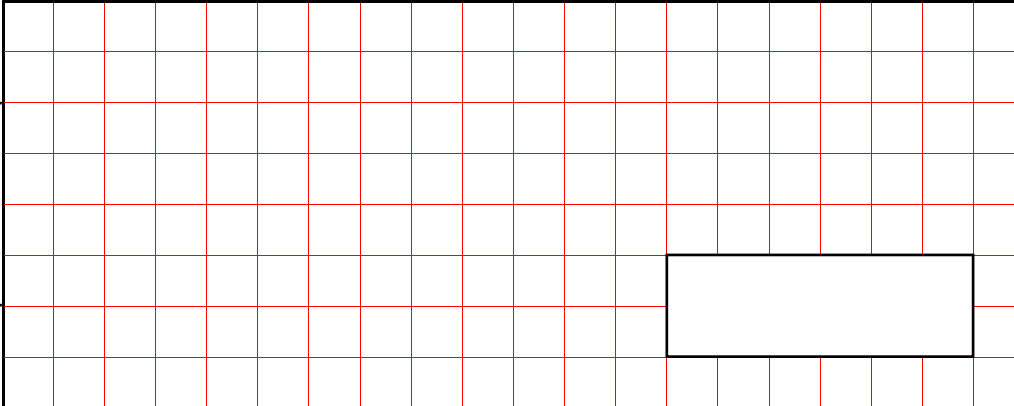
cm

1 mark

- 14 Evie thinks of a number less than 20
She divides it by 10 and then adds 5
She then divides this result by 2
Her answer is 3.2

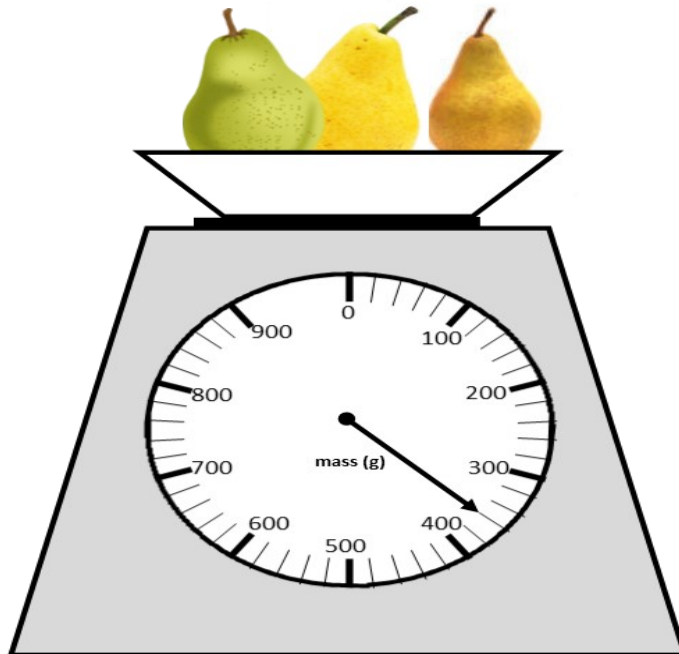
What was the number she started with?

Show your method



2 marks

15



What is the mean **average** mass of these three pears?

g

1 mark

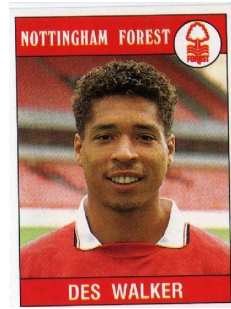
16

Zac is collecting football stickers.

There are 18 stickers on each page.

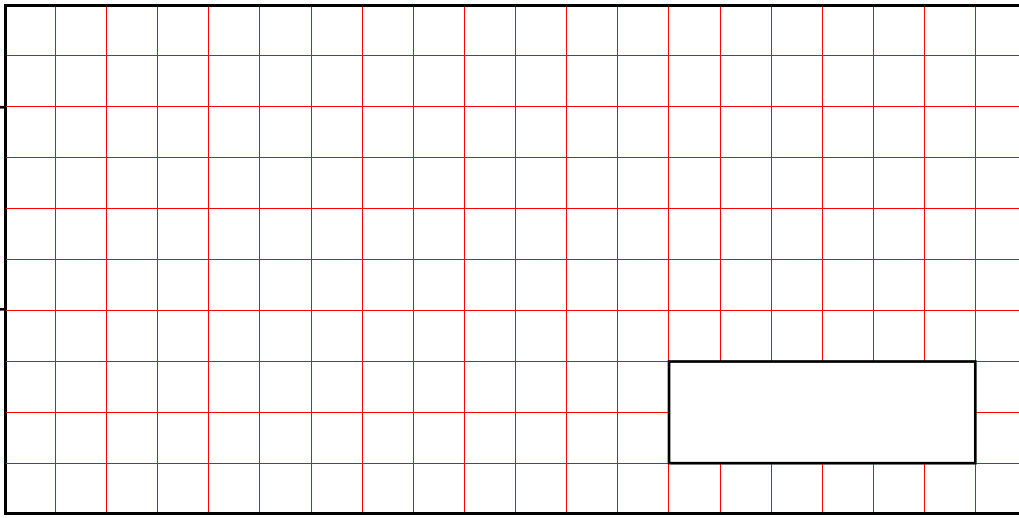
His sticker book has 32 pages.

He already has 165 stickers stuck in his book.



How many **more stickers** does he need to complete his book?

Show
your
method



2 marks

17

Match the fractions with the equivalent percentage.

One has been done for you.

$$\frac{1}{2}$$

40%

$$\frac{4}{20}$$

50%

$$\frac{2}{5}$$

20%

$$\frac{20}{1000}$$

2%

1 mark

18 It costs £8,500 to stage a concert.

Tickets are sold for £32 each.



How many tickets need to be sold to make a profit?

Show your method

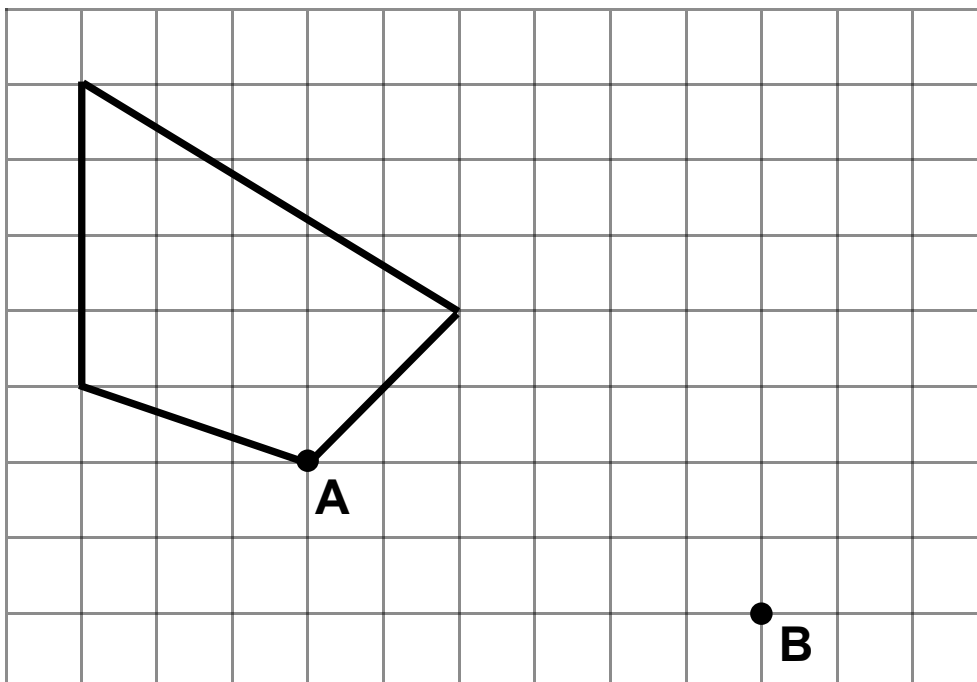
2 marks

19 Here is a quadrilateral on a square grid.

The quadrilateral is translated so that point **A** moves to point **B**.

Draw the quadrilateral in its new position.

Use a ruler.



1 mark

20

Adam, Marcus and Evie count the money they have in their pockets.
Adam has 10p more than Marcus.
Marcus has 5p more than Evie.
Altogether they have 80p.

How much money does Adam have?

Show your method

A large grid for showing the method. A small box is provided for the answer.

2 marks

21

There are 60 children in Year 6.
They are voting for a class captain.
20% vote for Felix.
35% vote for Gabs.
The rest vote for Nick.

How many votes does Nick get?

Show your method

A large grid for showing the method. A small box is provided for the answer, labeled "votes".

2 marks