
NUMERACY PROFESSIONAL SKILLS TEST PRACTICE TEST 2

First name

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Surname

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Date of test

				/				/			
--	--	--	--	---	--	--	--	---	--	--	--

This non-interactive practice material is intended to help you to practise answering questions and become familiar with the format of the paper-based versions of the Skills Tests.

In your actual paper-based test you will be provided with a guidance sheet and instructions for each section before you start the test. You will be able to refer to these throughout the test. Similar guidance is included below for your reference.

If you will be taking your actual test on computer, you are recommended to practise using the on screen practice tests.

Instructions

For the actual test, you will be provided with blank paper which you can use to record any working out.

The test contains two sections: mental arithmetic questions and written data and arithmetic questions. The practice test is designed to help you practise answering questions and become familiar with the format of the test. The questions are similar, but not identical, in structure to questions in the actual test.

A mark scheme is included at the end of the test which shows the correct answer for each question. At the end of this document there is guidance on how to answer each question in the test, for your reference during or after the test.

Mental Arithmetic Questions

The first section contains one practice question and 12 mental arithmetic questions.

- The first question is a practice question which will not contribute to your overall mark. All other questions are worth one mark each.
- You are allowed 55 seconds to read and answer each mental arithmetic question. For the actual test, if you do not have any hearing impairments, your test administrator will read out each question twice to you. This takes place **within** the time limit for each mental arithmetic question.
- You should note any instructions given in questions about the format of your answer, e.g. "correct to one decimal place".
- The question text is included in the space for each question.
- You should write your answer in the answer space for that question.
- You are not allowed to return to the mental arithmetic questions once they have been completed. In the actual test, this section will be removed once it has been completed.
- Decimal numbers should be written using a 'full stop' for the decimal point, for example '12.5'.
- Use of a calculator is **not** allowed in this section.

Written Data and Written Arithmetic Questions

The second section contains 16 questions worth one mark each. You are allowed 36 minutes to complete this section.

- You may answer the questions in any order.
- Some written questions share the same context.
- Decimal numbers should be written using a 'full stop' for the decimal point, for example '12.5'.

A question may require you to:

- write your answer in the answer space;
- indicate the correct area(s) on a table, chart or graph by circling or ticking;
- tick the correct answer option(s) from a list;
- copy given value(s) into empty spaces in sentences, tables or charts.
- You are allowed to use a four-function calculator for questions in this section. For your actual test, your test centre will provide the calculator.
- For your actual test, your invigilator will advise you when there are 5 minutes remaining until the end of your test.

Mental Arithmetic

Write your answers in the spaces.

Practice question

A school is looking at changing the end of the school day.

Each school day is made up of 5, 55 minute lessons, a break of 20 minutes and a lunch time of 1 hour.

If the school day starts at 0850 what time will it finish?

Give your answer in 24 hour clock time.

Answer: : hours

Question 1

In Year 3 and 4 at a large primary school there are 6 classes of 31 children and 2 classes of 32 children.

How many children is this altogether?

Answer: _____ **children**

Question 2

25 pupils at a secondary school are on average 5 minutes late arriving to school each day.

How many hours and minutes of time is lost by this group of children per day?

Answer: _____ **hours** _____ **minutes**

Question 3

A middle ability Year 6 maths class of 25 children contains 12 boys.

What percentage of the class is girls?

Answer: _____ %

Question 4

A school's Year 6 target for children being secure in Mathematics is 90%.

If there are 120 children in Year 6 what is the least number of children this can be?

Answer: _____ children

Question 5

For Enterprise Day a class decides to make milk shakes to sell to other children in the school.

There are 20 pupils in the class and each pupil will need 85 cl of milk to make their drink. Milk comes in 100 cl bottles.

How many bottles will they need?

Answer: _____ **bottles**

Question 6

The morning session in a school started at 0855.
Registration lasted for 25 minutes and then there were
two lessons of 55 minutes before break time.

At what time did break time start?

Give your answer using the 24-hour clock.

.

Answer: : hours

Question 7

A child scored 12 out of 40 in a spelling test.

What is this score as a percentage?

Answer: _____ %

Question 8

A class raised £26 for Children in Need by placing 20p pieces inside a large cut-out of Pudsey bear.

How many 20p pieces were used?

Answer: _____ **20p pieces**

Question 9

35% of a year group of 120 children have English as an additional language.

How many children is this?

Answer: _____ **children**

Question 10

15 out of 120 Year 6 children receive additional time in their KS2 SATs exams.

What fraction of the year group is this?

Write your answer in its simplest form.

Answer: $\frac{\square}{\square}$

Question 11

15 teachers visit Hungary to look at good practice in mathematics teaching.

The bus fare from their hotel to the school costs 3600 Forints for all the teachers.

If there are 400 Forints to the £1, how much does the journey cost in £1's?

Answer: £_____

Question 12

A school trip to a Dutch theme park was budgeted at £360 per pupil.

2 fifths of the cost was to pay for supply cover at the school.

How much was left to pay for accommodation, transport, food and entrance to the theme park?

Answer: £_____ per pupil

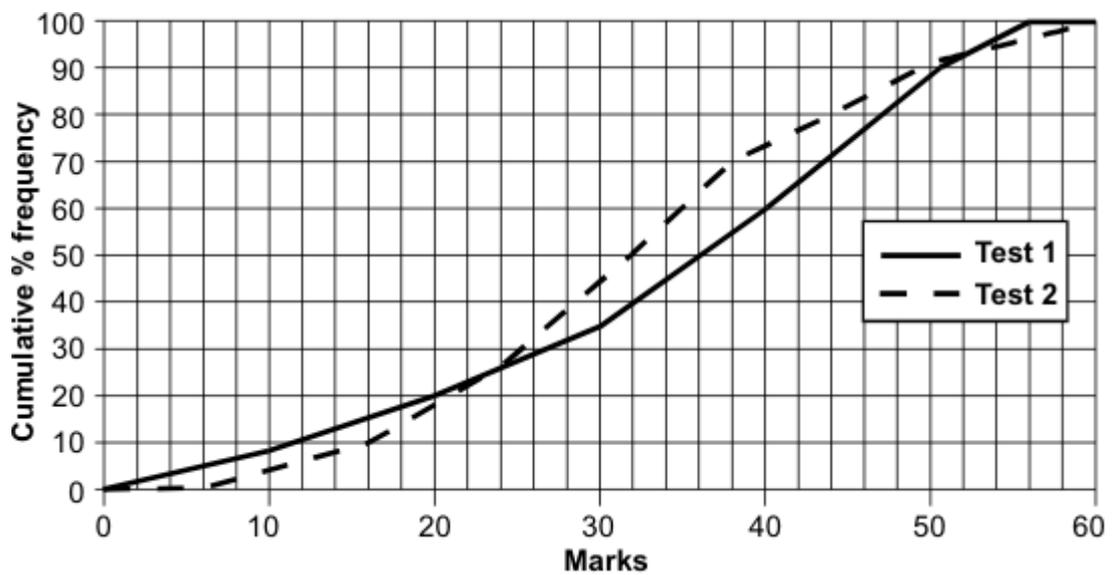
Written Data and Arithmetic

Question 13

200 pupils in Year 9 at Oakdene School took two mathematics tests in January.

Each test had a maximum of 60 marks.

The graph shows the pupils' results.

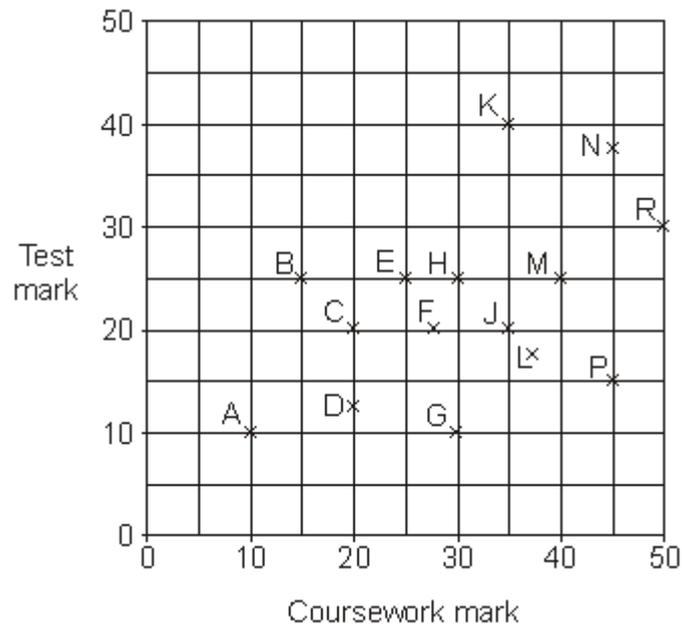


Put a tick (✓) next to each statement that is true.

- The majority of pupils taking Test 1 obtained fewer than 30 marks.
- In Test 1, 20 pupils obtained 12 marks or fewer.
- In Test 2, no pupils obtained fewer than 5 marks.

Question 14

The scatter graph shows 15 pupils' coursework and test marks.

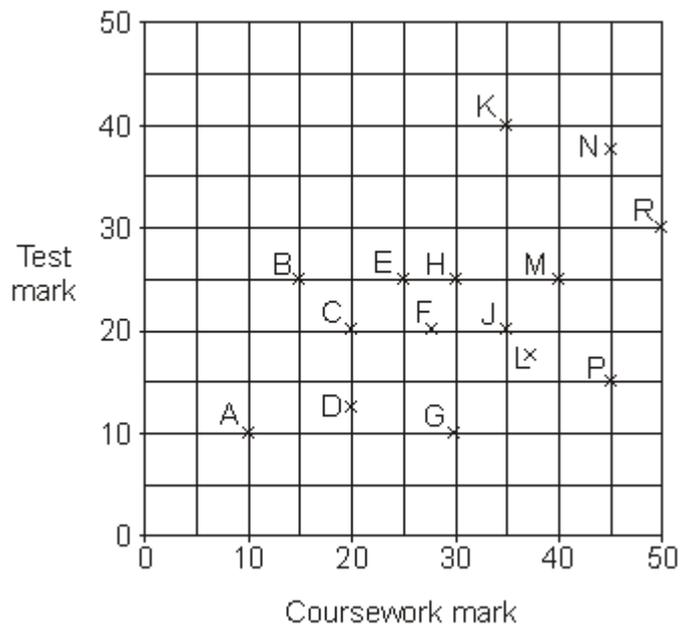


To find a pupil's **total** mark you add the coursework mark to the test mark.

Which pupil had the highest **total** mark?

Answer: Pupil_____

Question 15



Look at the statement below. Tick (✓) True or False.

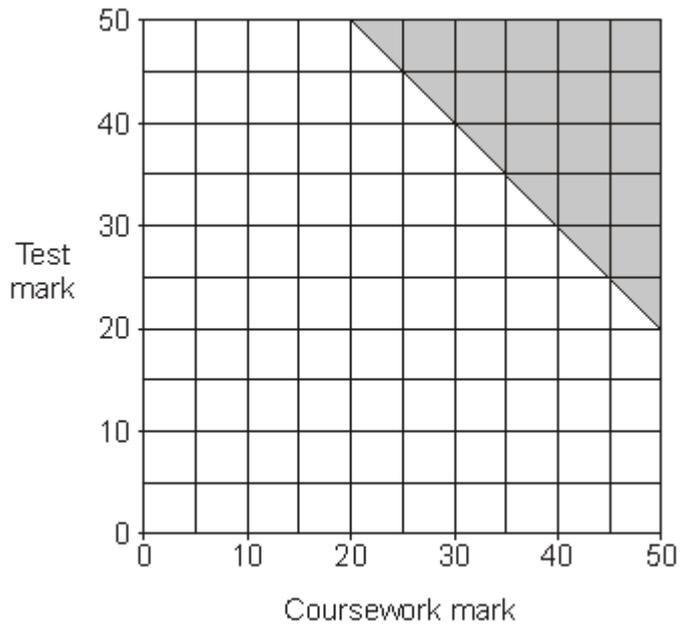
The range of coursework marks was greater than the range of test marks.

True

False

Question 16

Pupils with total marks in the shaded region on the graph win a prize.



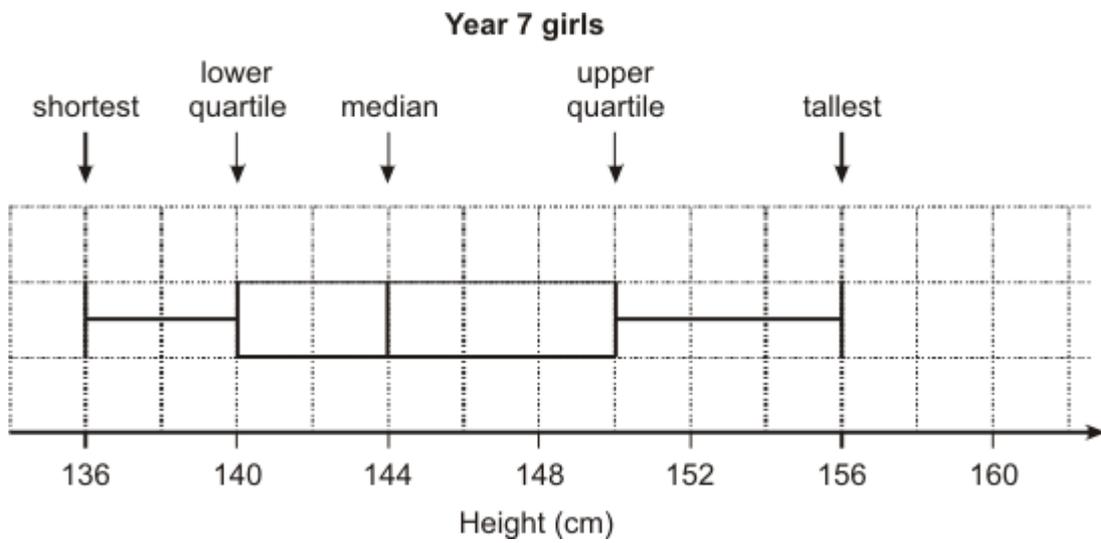
What is the **smallest total mark** needed to win a prize?

Answer: _____

Question 17

A pupil recorded the heights of all the **girls** in **year 7**.

She summarised her results, then drew this box plot.



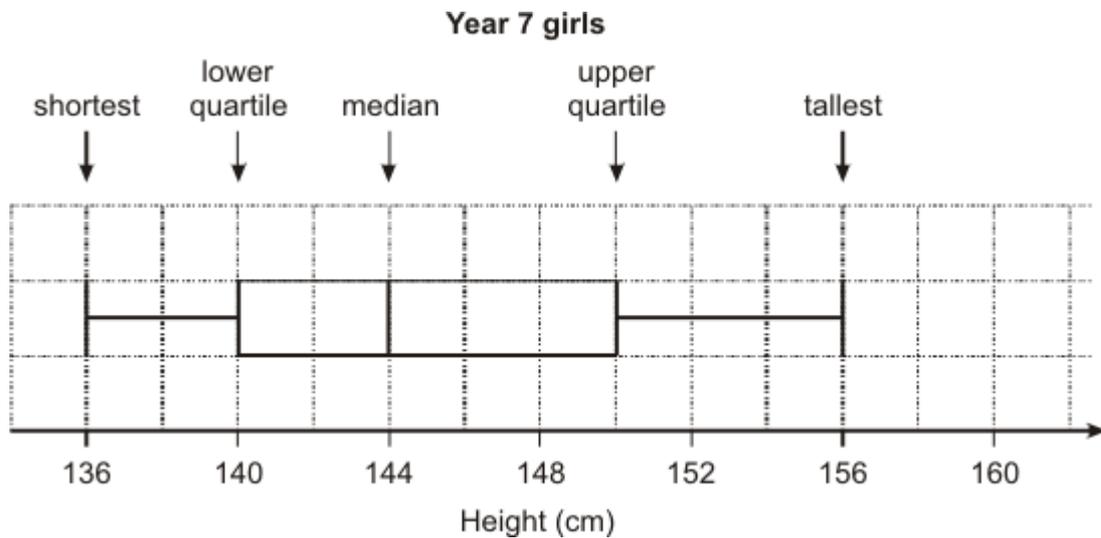
What is the interquartile range for the height of the girls?

Answer: _____ cm

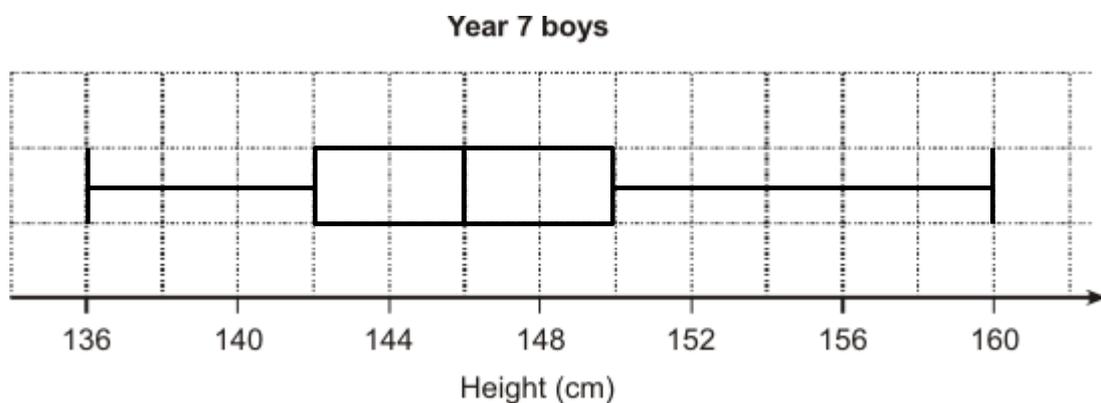
Question 18

A pupil recorded the heights of all the **girls** in **year 7**.

She summarised her results, then drew this box plot.



This is the box plot for boys in year 7.



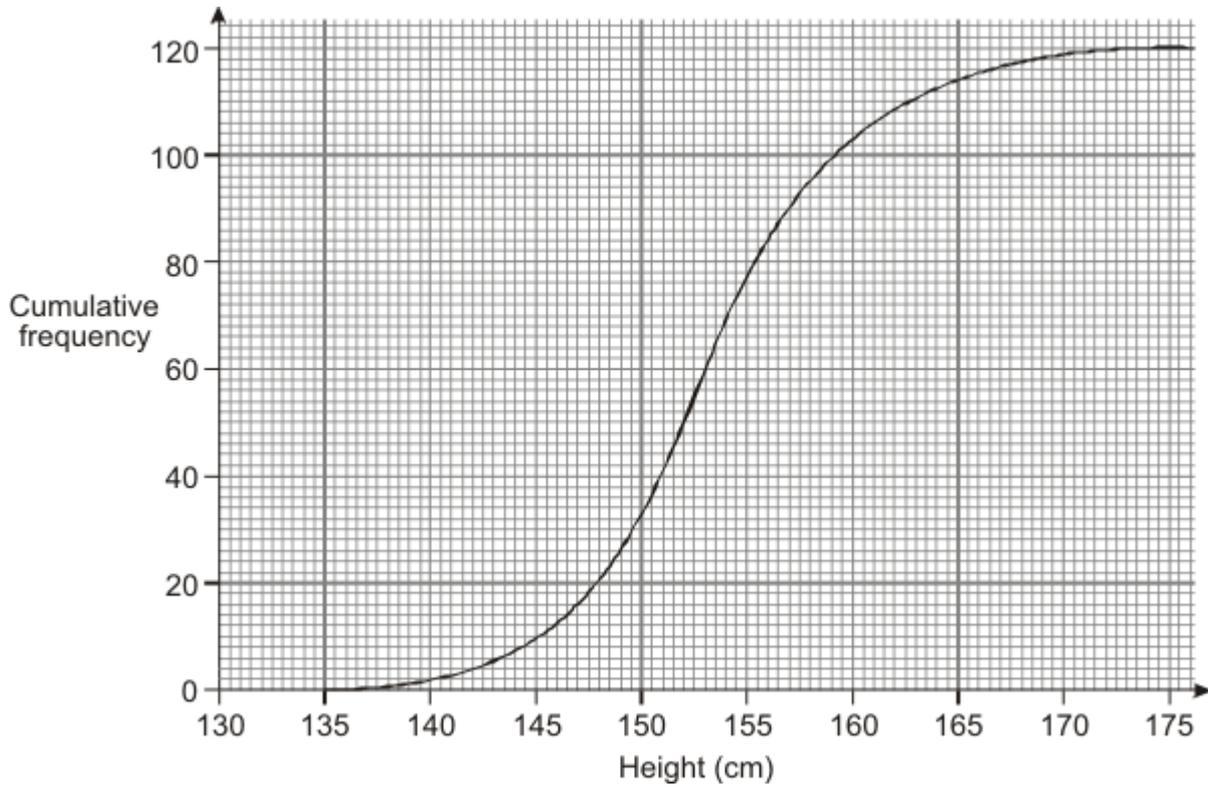
Put a tick (✓) next to each statement that is true.

- The interquartile range of boys' heights was greater than the interquartile range of the girls' heights.
- The range of the boys' heights was greater than the range of the girls' heights.
- The median values for the heights of the boys and the girls are equal.

Question 19

There are 120 girls in **year 9**.

The cumulative frequency diagram shows information about their heights.



What is the interquartile range for this data?

Give your answer to the nearest cm.

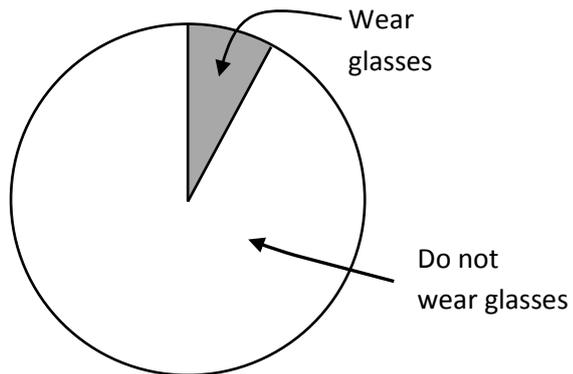
Answer: _____ cm

Question 20

There are **60 pupils** in a school.

6 of these pupils wear glasses.

The pie chart illustrates this data. It is not drawn accurately.



What size should the angle be for pupils who **do not wear glasses**?

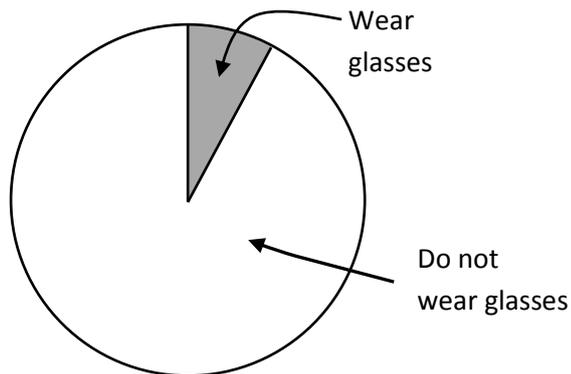
Answer: _____ °

Question 21

There are **60 pupils** in a school.

6 of these pupils wear glasses.

The pie chart illustrates this data. It is not drawn accurately.



Exactly **half** of the 60 pupils in the school are boys.

Using the information given, what percentage of boys in this school wear glasses?

Tick (✓) the correct box below.

5%

6%

10%

20%

50%

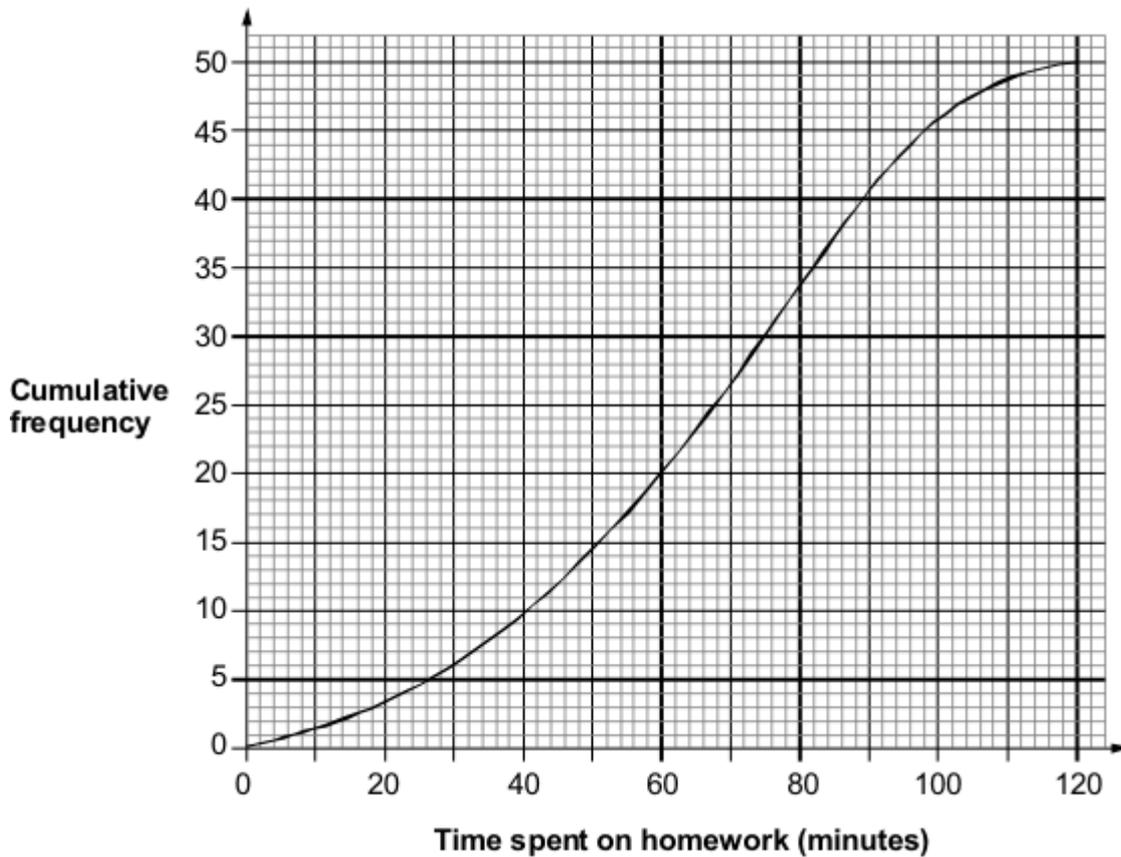
not possible to tell

Question 22

A teacher asked 50 Year 8 pupils,

“How much time did you spend on homework last night?”

The data is summarised in the cumulative frequency diagram below.



Estimate the median time pupils spent on their homework.

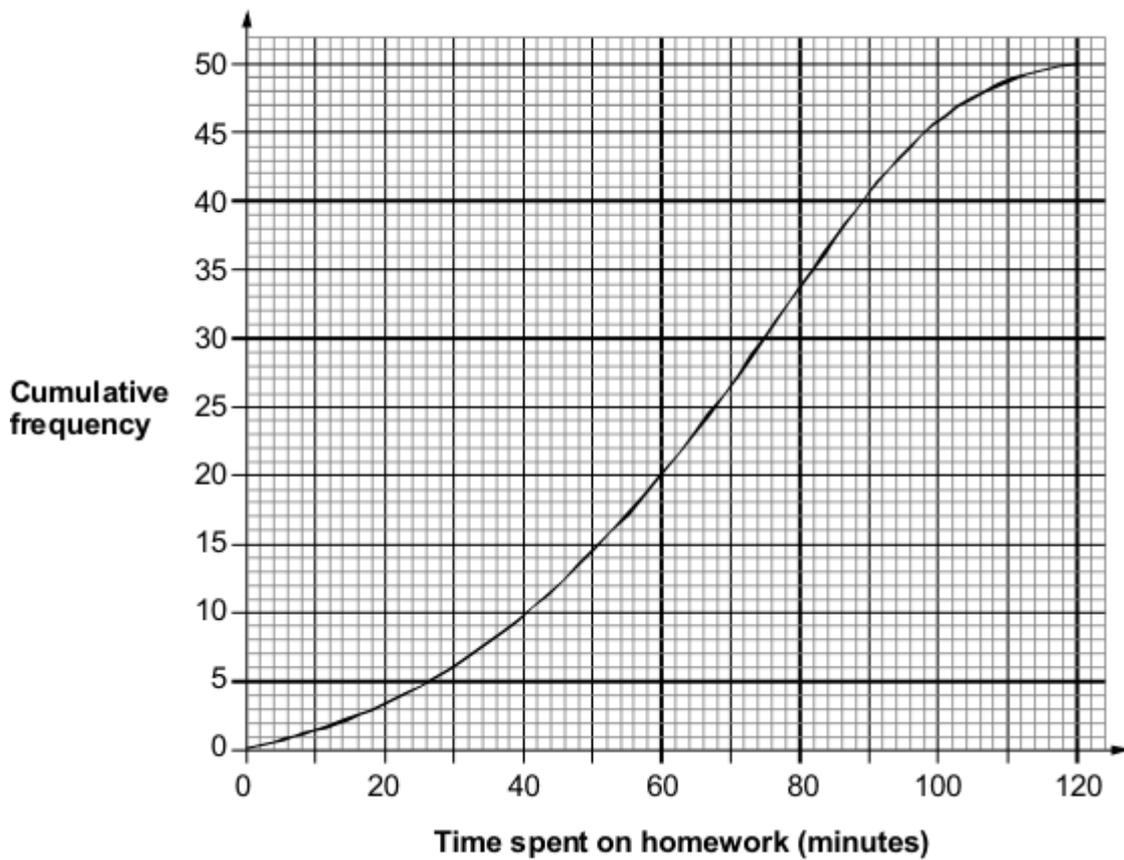
Answer: _____ minutes

Question 23

A teacher asked 50 Year 8 pupils,

“How much time did you spend on homework last night?”

The data is summarised in the cumulative frequency diagram below.



Estimate how many pupils spent more than 100 minutes on their homework.

Answer: _____

Question 24

The table below shows the number of schools and the number of pupils in England.

	Number of schools	Total number of pupils
Primary	17 642	4 069 385
Secondary	3 625	3 315 805

The mean number of pupils in secondary schools is about k times the mean number of pupils in primary schools.

What is the value of k ? Tick (\checkmark) the correct box below.

2

3

4

5

Question 25

Look at the table:

Birth rate per 1000 population

	1961	1994
England	17.6	
Wales	17.0	12.2

In England, from 1961 to 1994, the birth rate **fell** by 26.1%.

What was the birth rate in England in 1994 ?

Give your answer correct to 3 significant figures.

Answer: _____

Question 26

Look at the table:

Birth rate per 1000 population

	1961	1994
England	17.6	
Wales	17.0	12.2

In Wales, from 1961 to 1994, the birth rate **fell**.

Calculate the percentage fall from 1961 to 1994.

Give your answer correct to 1 decimal place.

Answer: _____ %

Question 27

A SATs Mathematics paper from 2009 is made from 6 rectangular pieces of paper.



Each piece of paper measures **297 mm** by **420 mm**.

The mass of the paper is **80 g per m²**.

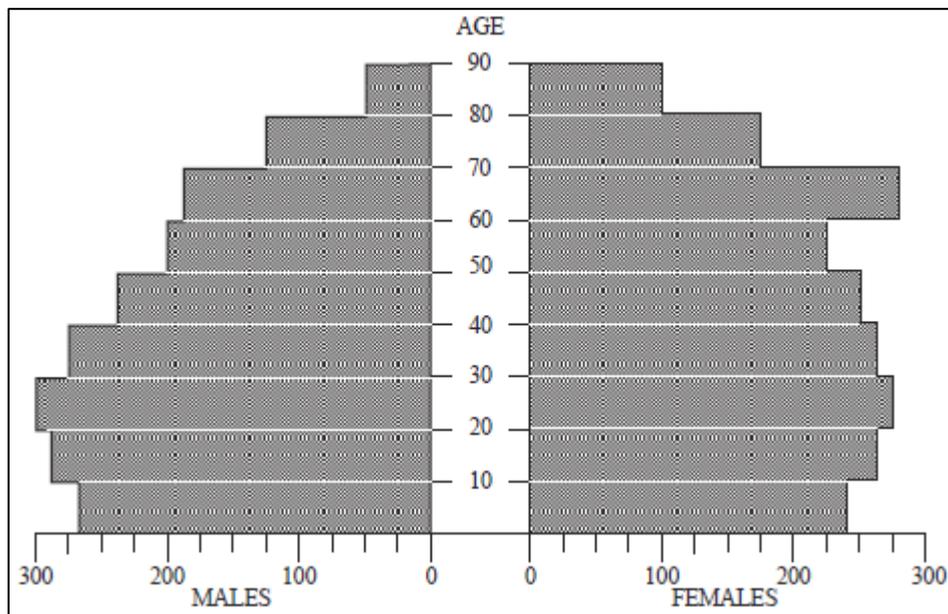
Calculate the mass of the 2009 exam paper.

Give your answer correct to **2 significant figures**.

Answer: _____ **g**

Question 28

The diagram below shows the population of a town of 4000 inhabitants.



Put a tick (✓) next to each statement that is true.

- There are more females than males in the 0-10 age group.
- There are more females in the 60-70 age group than in any other group.
- There are more females in the 60-70 age group than males in the 20-30 age group.