Level 1 Functional Skills Mathematics
SAMPLE PAPER 2

City & Guilds
A City & Guilds Group Business
Version 1.0

Duration: 25 minutes
Total marks: 15

SECTION 1 – CALCULATOR NOT PERMITTED

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Assessment date (DDMMYYYY)

Centre number

Candidate signature and declaration*

***I declare that I had no prior knowledge of the questions in this assessment and that I will not share information about the questions.**

Please check that your name is correctly printed on the candidate barcode label. If not, please tell the invigilator before the start of the exam.

You should have the following for this assessment:

- a pen with black or blue ink
- a pencil (for diagrams, graphs and charts only)
- an eraser
- a 30cm ruler
- a protractor.

You must NOT use a calculator for Section 1.

General instructions

- Read through each question carefully.
- Write all your answers in this booklet.
- Check your calculations and check that your answers make sense.

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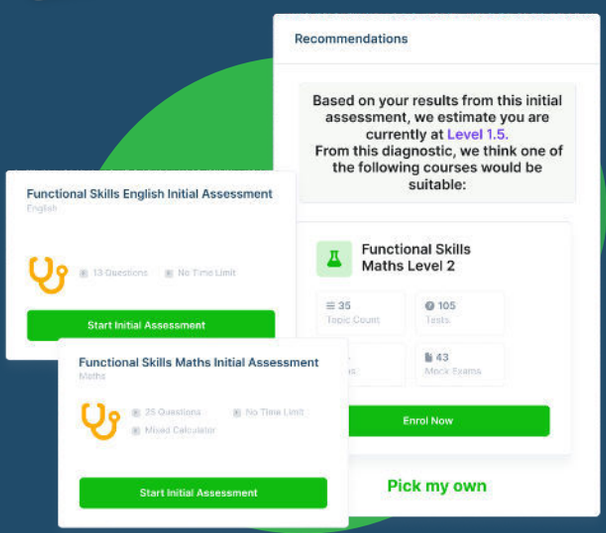
FUNCTIONAL SKILLS ONLINE COURSES



- Your answers are analysed to determine your Current Level
- Suggested courses for you to enrol on based on your calculated level
- Always know the level you are currently working at
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- Explainer videos on every topic
- Quick-fire style mutiple choice questions
- Test your knowledge with exam-style questions
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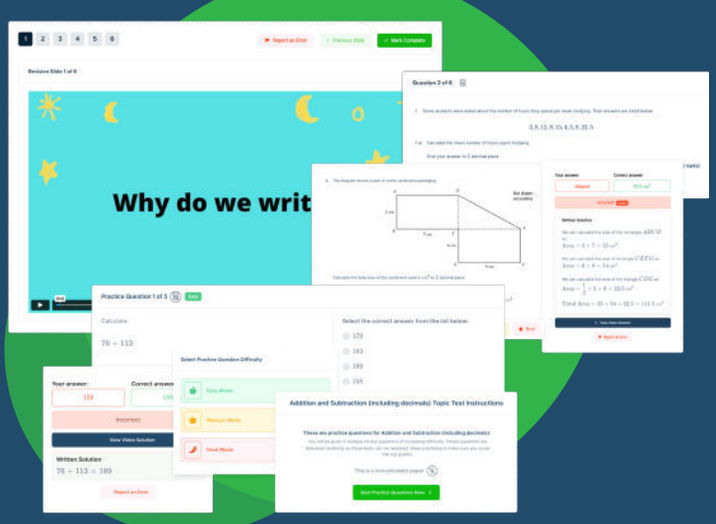

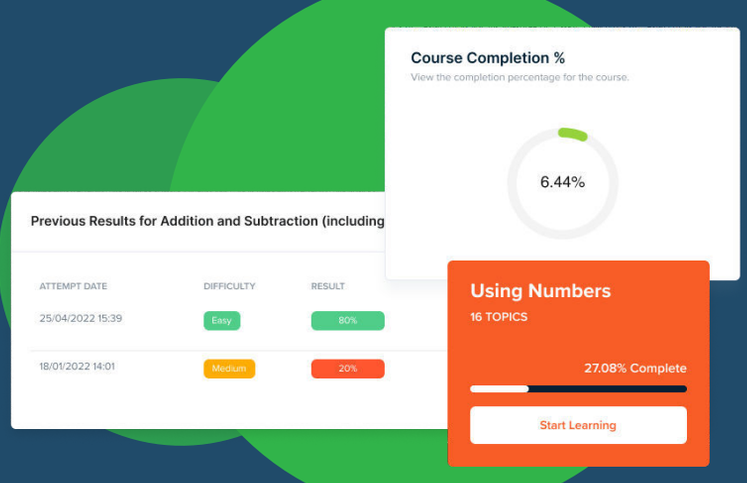

- See your progress through as you progress through each topic area
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SECTION 1 – CALCULATOR NOT PERMITTED

There are 10 marks available in this section.

You should check all your work as you go along.

You must not use a calculator in this section.

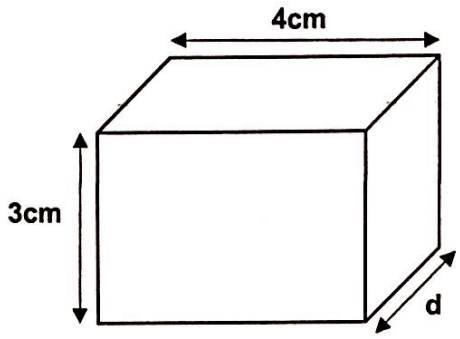
Q1

846.7 ÷ 100 =

8.467

(1 mark)

Q2 The volume of this cuboid is 24cm³.



What is the value for the depth d?

$4 \times 3 \times d = 24$

$12d = 24$

$d = 2$

2 cm

(1 mark)

Q3

9^2 =

81

(1 mark)

Q4

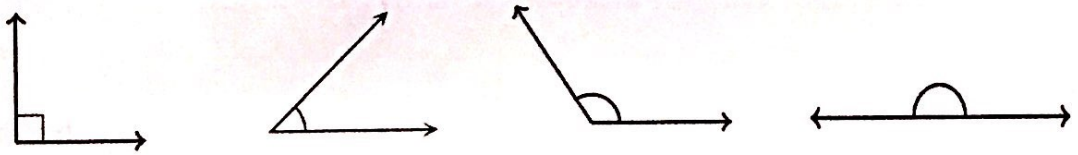
18 – 5 x 2 =

18 - 10

8

(1 mark)

Q5



A B C D

Which of the above has an angle of 180°?

(tick one box)

A ☐
B ☐
C ☐
D ☑

(1 mark)

Q6

Write two hundred and forty-six thousand eight hundred and five in figures

246805

(1 mark)

Q7

What is $\frac{2}{5}$ as a decimal?

(tick one box)

A 0.4 ☑
B 0.2 ☐
C 0.25 ☐
D 0.04 ☐

(1 mark)

Q8

$-6 + 4 =$

(tick one box)

A	−10	☐
B	− 2	☑
C	2	☐
D	10	☐

(1 mark)

Q9

What is the range of these weights?

40 kg 65kg 27kg 84kg 34kg

$84 - 27 = 57$

57 kg

(1 mark)

Q10 At a rugby match 19 417 home fans and 2 648 away fans attend.

What is the total attendance, rounded to the nearest hundred?

19417
+ 2648
22065

22100

(1 mark)

22100 to nearest hundred

Q11 A company conducts a survey. The survey asks people their ages.
The data will be grouped.

Complete the table with the missing age groups.

Age group boundaries
25 and under
26 - 35
36-45
46 - 55
56 - 64
65 and over

(1 mark)

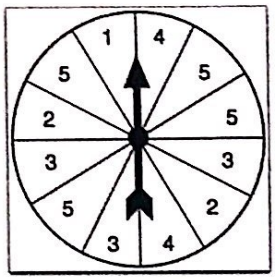
Q12 A manager wants to know the ratio of men to women in their factory. There are 135 men and 270 women working at the factory.

What is the ratio of men to women?

1 : 2

(2 marks)

Q13 A fair has a spin the arrow game.
A player wins a prize if the arrow lands on a 5.



What is the probability of a player winning a prize?
Write your answer as a fraction in its simplest form.

12 spaces
4 gives

$\frac{4}{12}$

$\frac{1}{3}$

(2 marks)

End of Section 1

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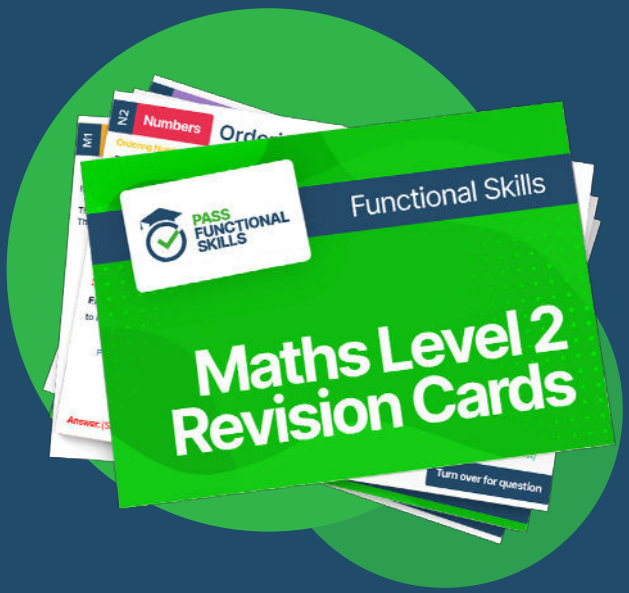

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Level 1 Functional Skills Mathematics
SAMPLE PAPER 2

City & Guilds
A City & Guilds Group Business
Version 1.0

Duration: 1 hour 20 minutes
Total marks: 45

SECTION 2 – CALCULATOR PERMITTED

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Assessment date (DDMMYYYY)

Centre number

Candidate signature and declaration*

• If you have used any additional answer sheets write the number of additional sheets in this box. ☐
• Please ensure that you **staple** additional answer sheets to the **back** of this booklet, clearly labelling them with your full name, enrolment number, centre number and date in BLOCK CAPITALS.
• You must use a black or blue pen. You may use a pencil for charts and diagrams.

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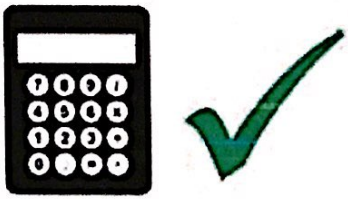

General instructions

- Read through each question carefully.
- Show your working out (where required).
- Write all your working out and answers in this booklet.
- Check your calculations and check that your answers make sense.
- There are additional pages **including graph paper** at the back of this booklet if you run out of space or ask the invigilator if you need additional sheets of paper.

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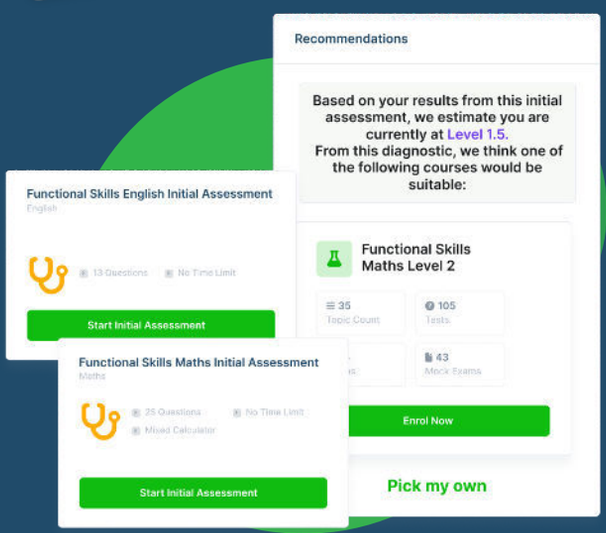

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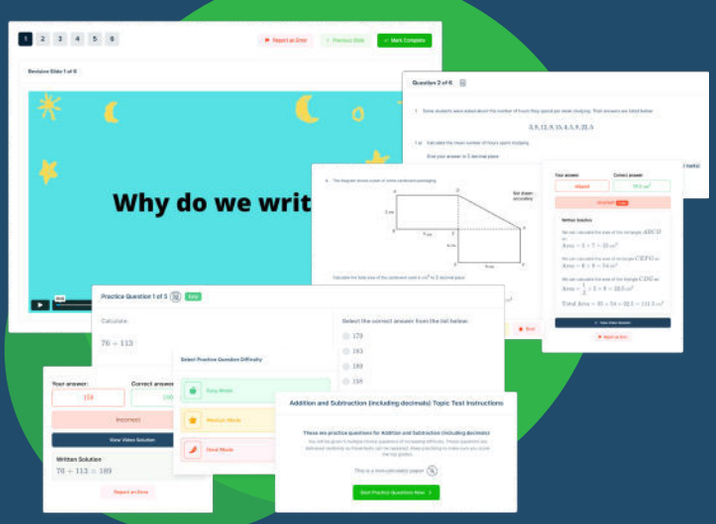

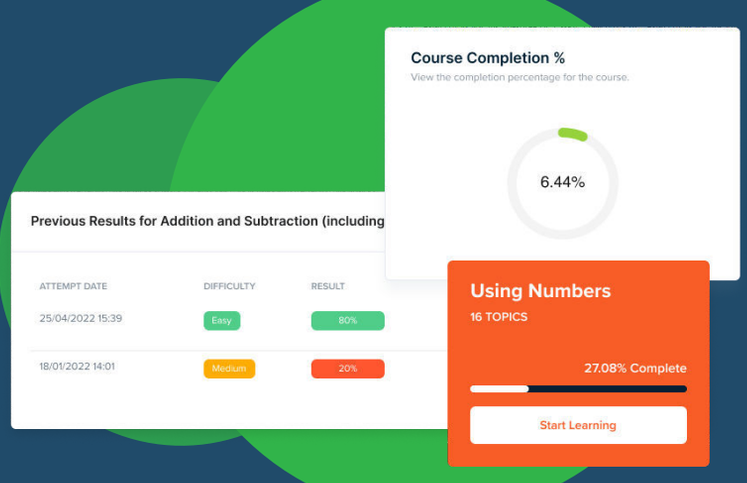

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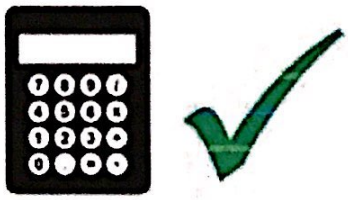
SECTION 2 – CALCULATOR PERMITTED

There are **45** marks available in this section.

You should check all your work as you go along.

You may use a calculator.



Q1

15	24	16	18	21

What is the mean of these numbers?

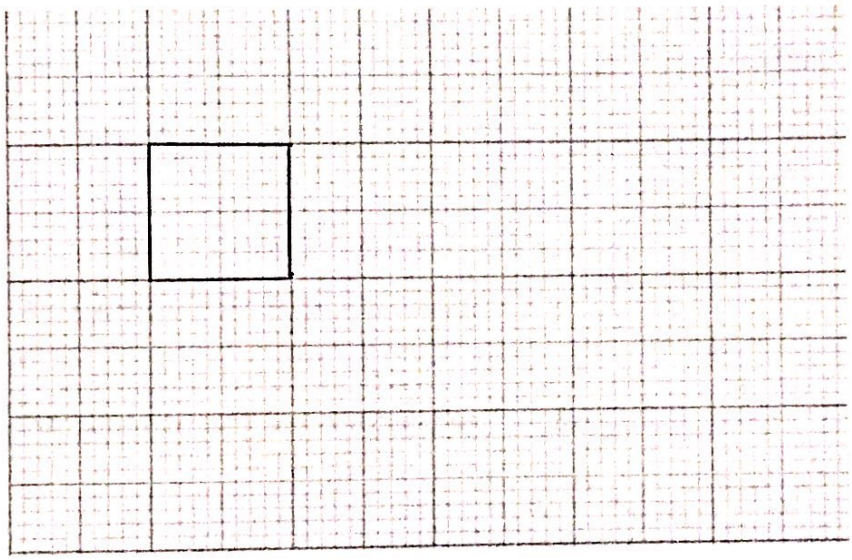
$\frac{15+24+16+18+21}{5} = 18.8$

18.8

(1 mark)

Q2

Draw a square with sides of 2cm



(1 mark)

Q3

Write $\frac{33}{8}$ as a mixed number.

$4\frac{1}{8}$

(1 mark)

Q4

Which of the following lists is in increasing order from smallest to largest?

(tick one box)

A	52%	53%	50%	55%	☐
B	50%	52%	53%	55%	☑
C	55%	52%	53%	50%	☐
D	50%	53%	52%	55%	☐

(1 mark)

Q5

140 x _____ = 8400

60

(1 mark)

Q6 A student states that 540cm is the same as 54m.

Are they correct? Explain your answer.

Are they correct? *(tick one box)* **Yes** ☐ **No** ☑

540cm = 5.4m, not 54m.

Explanation

(1 mark)

Q7 The formula below can be used to calculate interest on a savings account after one year:

amount put into account x interest rate **as a decimal**

A woman puts £2 500 into an account. The interest rate is 5%.

What will be in the account after one year?

Show your working

£2500 × 1.05 = £2625

£ 2625

(3 marks)

Q8 A taxi company charges £5 standing charge and £1.50 per mile for a journey.

A man travels in a taxi for 12.2 miles.

What is the cost of his journey?

Show your working

5 + 12.2 × 1.5 =

5 + 18.30 =

£23.30

£ 23.30

(3 marks)

Q9 A student receives two loans. One is for £9 153 and the other is for £8 944.

Approximately $\frac{1}{2}$ of the loans will be spent on tuition fees and $\frac{1}{4}$ of the loans will be spent on accommodation.

Estimate the amount of money they will have left.

Show your working

£9153 + £8944 ≃ £18000

$\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$.

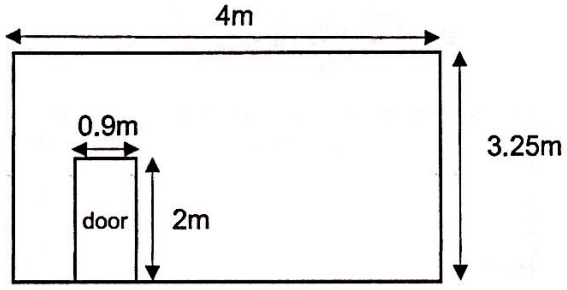
$\frac{3}{4} \times$ £18000 = £13500.

£18000 - £13500 = £4500.

£ 4500

(4 marks)

Q10 A decorator is painting a room and has one wall left to paint.
They have enough paint to cover 12m². The dimensions of the wall are shown below:



Sketch not to scale

She will not paint over the door.

Do they have enough paint for the wall?

Explain your answer. Use figures in your answer.

Show your working

$4 \times 3.25 = 13\ m^2$

$2 \times 0.9 = 1.8\ m^2$.

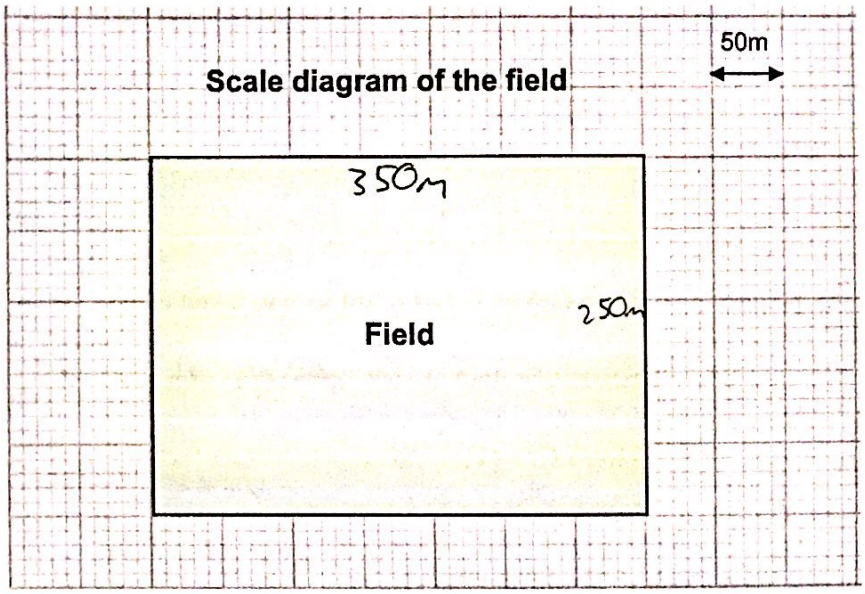
$13 - 1.8 = 11.2\ m^2$.

Do they have enough paint? *(tick one box)* **Yes** ☑ **No** ☐

Explanation

(4 marks)

Q11 A local sports club organises a sponsored walk around the edge of a field.



Each person will walk round the field 5 times.

How far will each person walk in kilometres?

Show your working

350 + 250 = 600 m.

600 × 2 = 1200 m.

1200 × 5 = 6000 m

6km.

6 km

(4 marks)

Q12 A cricket club sells 5,062 tickets for a charity match. 3,484 are Adult tickets and the rest are Under 18s tickets.

Ticket Prices	
Adults	£18
Under 18s	£12

85% of ticket sales pay for the event. The rest goes to community projects.

How much does the club give to community projects?

Show your working

Adults: $3484 \times 18 = 62712$.

Child: $5062 - 3484 = 1578$ $\quad 1578 \times £12 = 18936$.

$62712 + 18936 = 81648$.

85% go to event so 15% go to community.

$81648 \times 0.15 = £12247.20$

£12247-20.

(5 marks)

Q13 A gardener needs to buy compost to fill this tub.

The diagram shows the dimensions of the tub

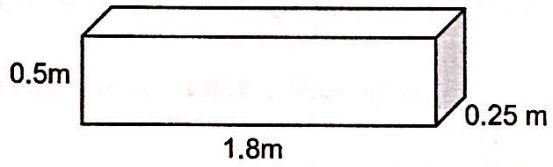


Diagram not to scale

They buy compost in 50 litre bags

1000 litres = 1m³

How many bags of compost must they buy?

Show all your working

$0.5 \times 1.8 \times 0.25 = 0.225 m^3$.

$= 225$ litres

$225 \div 50 = 4.5$.

Need 5 bags.

Number of bags 5

(5 marks)

Q14 20 students take a maths test. Their tutor records the scores. The list below shows their scores:

15, 24, 6, 8, 29, 6, 12, 17, 24, 22, 25, 30, 18, 3, 11, 7, 18, 27, 28, 27

Present these scores in **three** suitable groups

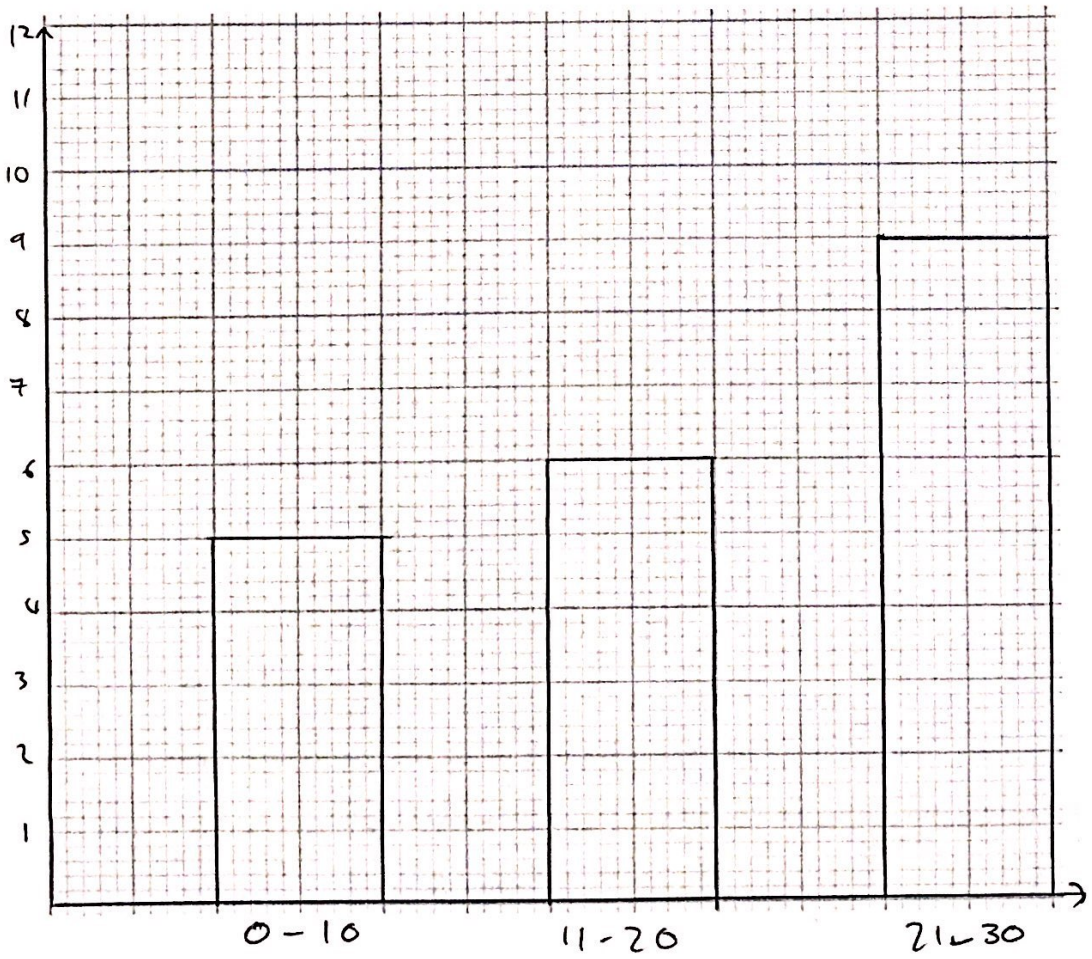
0–10 : 6, 8, 6, 3, 7 — 5

11–20 : 15, 12, 17, 18, 11, 18 . — 6

21–30 : 24, 29, 24, 22, 25, 27, 28, 27 . — 9

(2 marks)

Present this information in a suitable chart or graph.



There is spare graph paper on pg 21

(3 marks)

Q15 A school thinks their results are better than the national average.

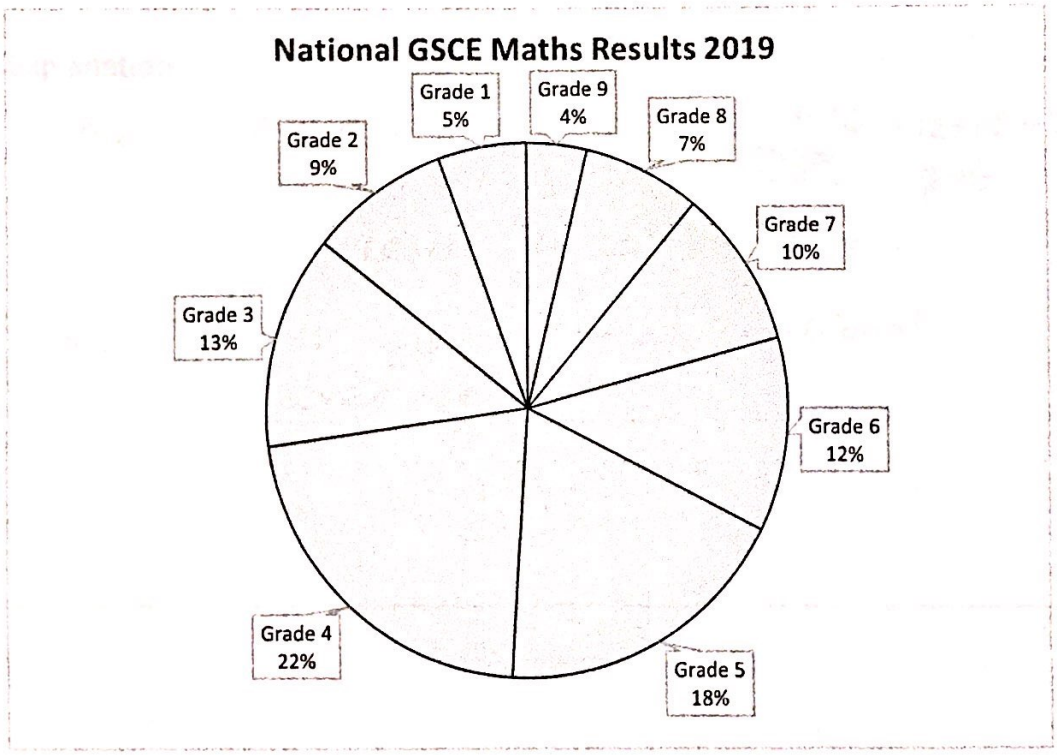
The school has a target for 65% of their students to achieve a Grade 4 or higher in their Maths GSCE.

A school governor uses this school table to check results.

School GSCE Maths Results 2019	
Grade	Number of Students
9 - Highest	7
8	11
7	18
6	22
5	27
4	55
3	27
2	22
1 - Lowest	11

She wants to compare her school's results with the national Maths GCSE results for Grade 4 and above.

She sees these national results.



She needs to write a report for the board of governors.

She says that the school has met its target **and** that its results are better than the national average.

Is the governor correct?
Explain your decisions. Show calculations to support your explanation.

Show all your working.

Total students = 7 + 11 + 18 + 22 + 27 + 55 + 27 + 22 + 11 = 200

Above grade 4 = 7 + 11 + 18 + 22 + 27 + 55 = 140.

$\frac{140}{200} = \frac{70}{100} = 70\%$.

So the target was met.

Target met? *(tick one box)* **Yes** ☑ **No** ☐

Better than national average? *(tick one box)* **Yes** ☐ **No** ☑

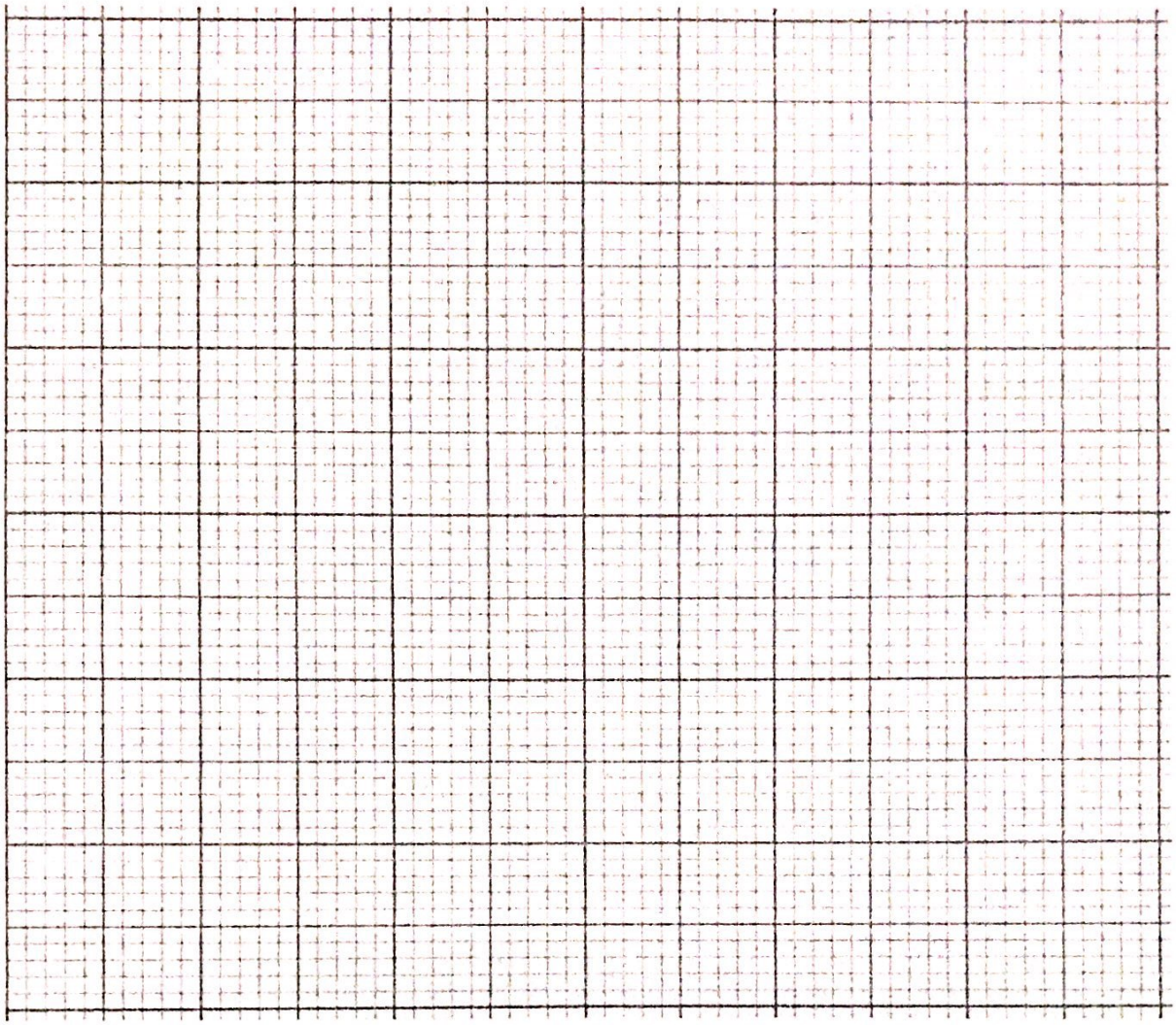
Explanation

National average 4 + 7 + 10 + 12 + 18 + 22
= 73% got level 4 or above.

So school worse than national average.

(6 marks)

Spare graph paper for Question 14



End of Section 2

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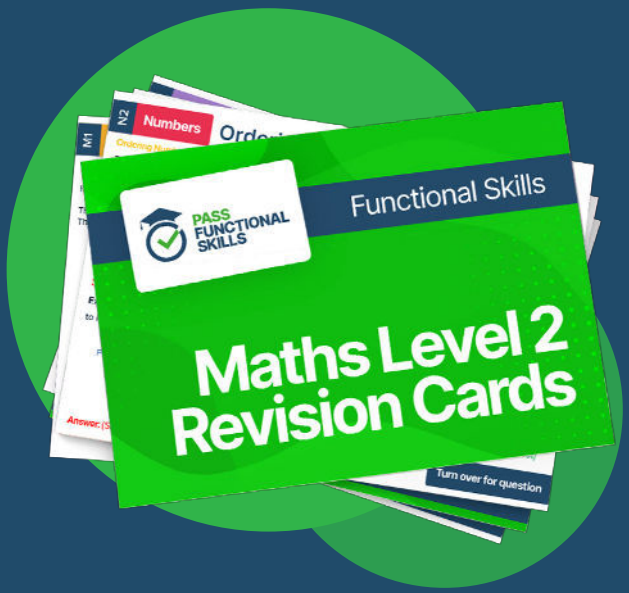

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