

# Level 2 Functional Skills Mathematics Sample 4

**Duration: 25 minutes**  
**Total marks: 15 marks**

## 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
- an eraser
- a 30cm ruler.

**You must NOT use a protractor.**

**You must NOT use a calculator for Section 1.**



**General instructions**

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

# .CG Maths.

Hints



Please note that these worked solutions have neither been provided nor approved by City & Guilds and may not necessarily constitute the only possible solutions. Please refer to the original mark schemes for full guidance.

Any writing in blue indicates what must be written in order to answer the questions and get the marks. The worked solutions have been designed to show the smallest amount of work which needs to be done to answer the question.

Anything written in green in a cloud doesn't have to be written in the exam.

Anything written in orange in a rectangle doesn't have to be written in the exam and is there to show what should be put into a calculator or measured using a ruler or protractor.

If you find any mistakes or have any requests or suggestions, please send an email to [curtis@cgmaths.co.uk](mailto:curtis@cgmaths.co.uk)

# .CG Maths.

## SECTION 1 – CALCULATOR NOT PERMITTED

There are **15** marks available in this section.

You should check all your work as you go along.

You must **not** use a calculator in this section.



# .CG Maths.

Q1

$$672 \div 21$$

$$\begin{array}{r} 21 \overline{) 672} \\ 21, 42, \end{array}$$

\_\_\_\_\_ (1 mark)

Q2

What is 0.825 as a percentage?

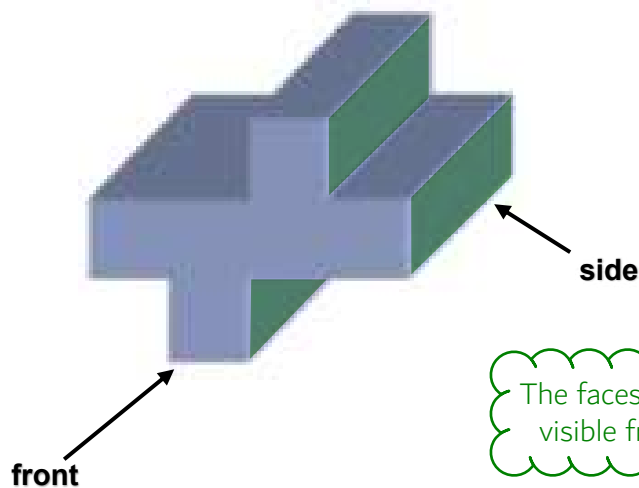
To convert a decimal to a percentage, multiply it by 100.  
Move the decimal point twice to the right to do this

\_\_\_\_\_ %

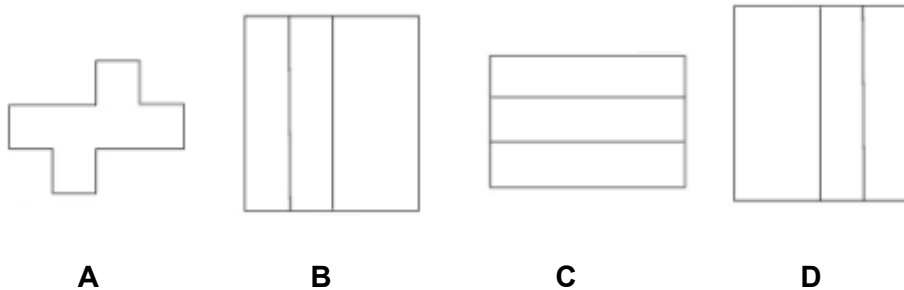
(1 mark)

Q3

The diagram shows a cross section of a metal bar.



Which one of the following is the **side elevation**?



\_\_\_\_\_ (1 mark)

# .CG Maths.

Q4

$$\frac{\sqrt{15-6}}{3} =$$

Deal with the 15 - 6 first. Then square root the answer. Then divide the result by 3

\_\_\_\_\_ (1 mark)

Q5

A box of chocolates contains 4 hard centres, 6 soft centres and 2 plain chocolates.

A woman chooses a chocolate at random.

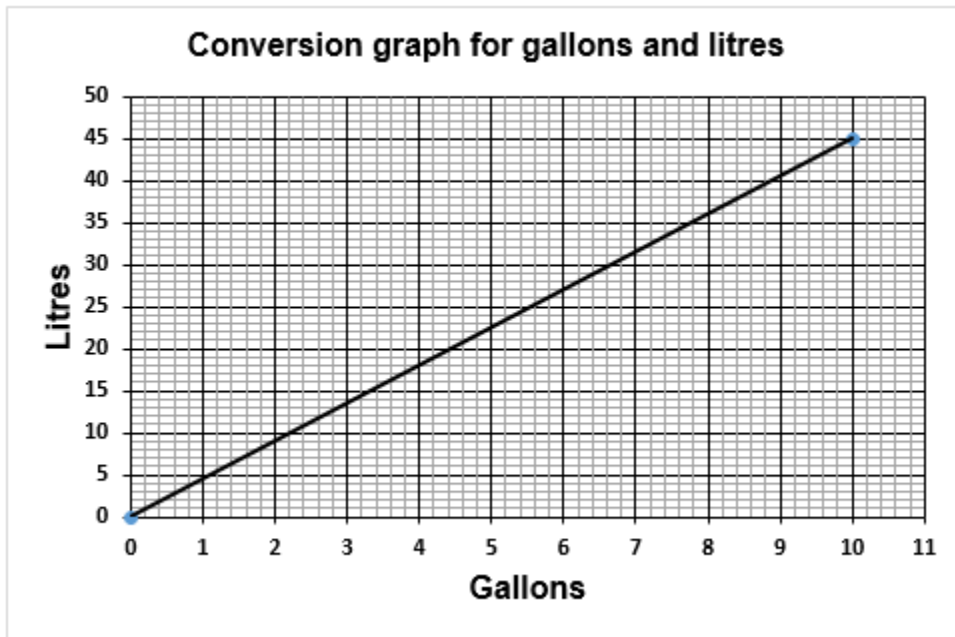
What is the probability that she takes either a hard centre or a soft centre?  
Give your answer as a fraction in its lowest terms.

Express the fraction of the total number of chocolates which have a hard centre or a soft centre. Simplify the fraction by dividing both the numerator and denominator by the same amount until they cannot be divided any further without getting decimals

$$\frac{\square}{\square}$$

(1 mark)

Q6



What is 6 gallons in litres, to the nearest litre?

Reading up from 6 gallons to the line  
then across converts it into litres

\_\_\_\_\_ litres

(1 mark)

Q7

What is 42% of 400?

1% is  $\frac{1}{100}$  of 400, which is found by dividing it  
by 100. Removing two zeros does this. Multiplying  
the value of 1% by 42 gives 42%

\_\_\_\_\_

(1 mark)

# .CG Maths.

Q8

An inspector checks the weights of bags of crisps.

Weight of bags of crisps in grams(g)				
24.4	25.5	25.0	25.3	24.4
26.5	25.5	24.9	24.4	25.5
25.5	25.1	25.5	24.2	24.5

What is the modal weight for the bags of crisps?

The mode is the weight which appears more times than any other

\_\_\_\_\_ g  
(1 mark)

Q9

$$18.369 + 3.197 - 2.475 =$$

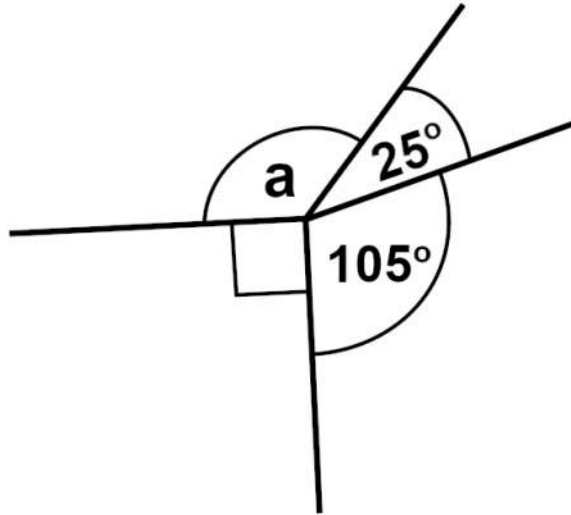
$$\begin{array}{r} 18.369 \\ + 3.197 \\ \hline \end{array}$$

Then subtract 2.475 from the result, making sure that all of the digits are in the correct column

\_\_\_\_\_ (1 mark)

# .CG Maths.

Q10



What is the value of angle **a**?

There are  $360^\circ$  in total around a point. So subtracting the other angles from  $360^\circ$  leaves the missing angle

Angle **a** \_\_\_\_\_ $^\circ$

(1 mark)



## Q11

Eight bricklayers on a building site took 25 hours to build a wall.

The Site Manager needs a similar wall built.

He can hire five bricklayers to build this wall.

He needs to know how much longer it will take to build this wall.

How much **longer** will it take?

### Show your working

Multiplying the 25 hours each worker did by the 8 bricklayers works out how many hours worth of work needs to be done. Dividing this work by the 5 bricklayers works out how many hours each bricklayer will do. Work out how many more hours than 25 this is

\_\_\_\_\_ hours

(2 marks)

## Q12

A woman needs to work out how long it will take to drive to York.

She checks the journey on a website.

The distance from her house to York is 80 miles.

20 miles of the journey are through roadworks with a speed restriction of 40mph.

She should drive the rest of the journey at an average speed of 50mph

How long should the journey take?

### Show your working

$s^d_t$

Writing the formula triangle for distance, speed, time. To use the formula triangle, cover over what we are looking for then what is left tells us how to work it out. Work out the time taken through the roadworks as a fraction of an hour and the time taken for the rest of the journey as a fraction of an hour. Add the two times together by making the denominators the same then convert the improper fraction into a mixed fraction. The whole number is the number of hours and the fraction of an hour can be converted into minutes using the fact there are 60 minutes in an hour

Time taken \_\_\_\_\_ hours \_\_\_\_\_ minutes

(3 marks)

End of Section 1