

Level 2 Functional Skills Mathematics Sample 3

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.

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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

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.



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Q1

$$531 \times 1.4 =$$

$$\begin{array}{r} 531 \\ \times 1.4 \\ \hline \end{array}$$

There is 1 decimal place in the 1.4 so there should be 1 decimal place in the answer

_____ (1 mark)

Q2

$$5^4 =$$

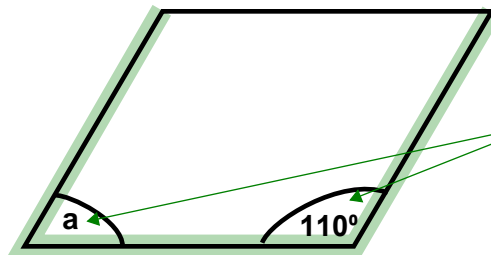
$5^4 = 5 \times 5 \times 5 \times 5$. Multiply by one 5 at a time

_____ (1 mark)

Q3

The following diagram shows a parallelogram.

Diagram not to scale



Both of these angles are co-interior as there are two parallel lines connected with a straight line. Therefore they add to 180°

What is the size of angle a?

Angle a = _____°

(1 mark)

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Q4

Which one of the following works out to the largest number?

(tick one box)

A $\frac{3}{4} \times 8 =$

B $\frac{2}{6} \times 12 =$

C $\frac{3}{2} \times 10 =$

D $\frac{3}{12} \times 36 =$

To multiply an amount by a fraction, divide the amount by the denominator then multiply the result by the numerator

(1 mark)

Q5

What is 52% as a fraction in its lowest terms?

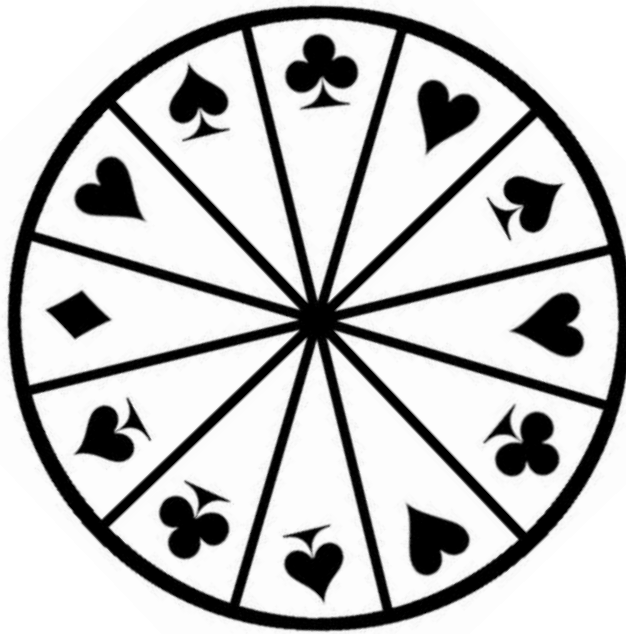
Percentage is out of 100 so as a fraction 52% is 52/100. Simplify it by dividing both the numerator and denominator by the same amount until they cannot be divided any more without getting decimals

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

(1 mark)

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Q6



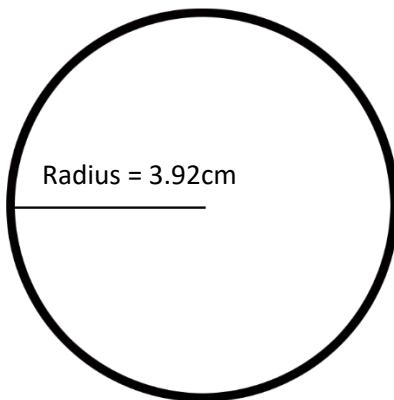
If the wheel is spun again what is the chance of \blacklozenge being the winner?
Give your answer as a fraction.

1 out of the 12 possibilities is a diamond. The fact it has just been a diamond already has no impact on the next spin

<input type="text"/>
<hr/>
<input type="text"/>

(1 mark)

Q7



Which calculation gives an approximation of the area of this circle in cm^2 ?

(tick one box)

- A $3 \times 8 =$
- B $3 \times 4 =$
- C $3 \times 16 =$
- D $3 \times 9 =$

Area of circle = $\pi \times \text{radius}^2$. π is about 3

(1 mark)

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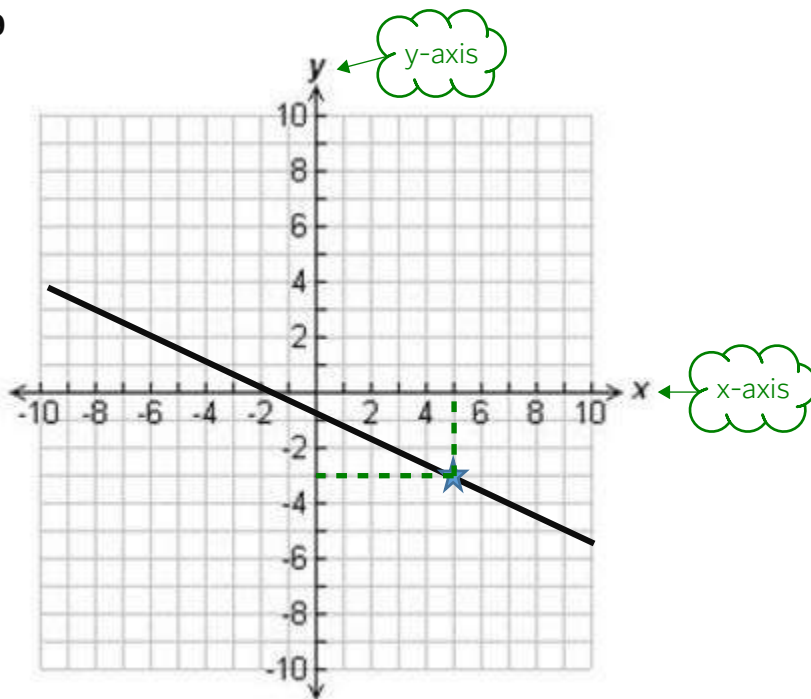
Q8

Calculate $\frac{8 - 4^2}{8} =$

Deal with the 4^2 first then subtract the result from 8 then divide the result by 8. $4^2 = 4 \times 4$

(1 mark)

Q9



What are the coordinates of the line at point ★?

(tick one box)

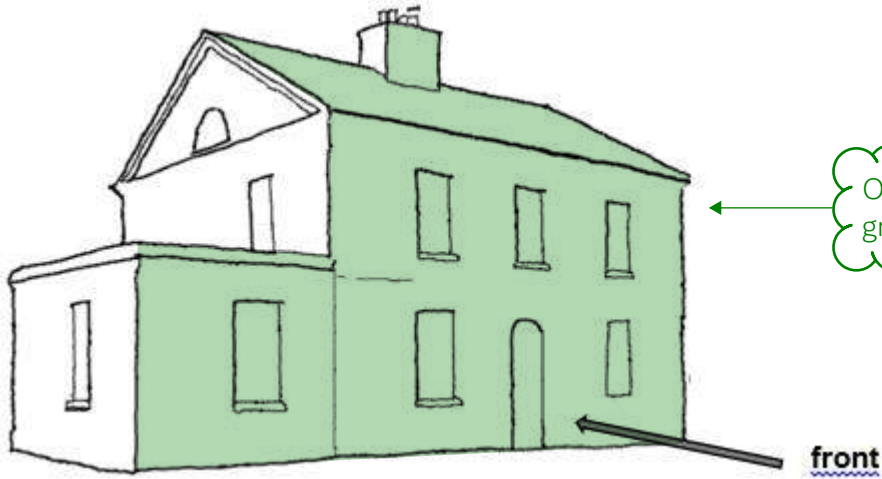
(x-coordinate, y-coordinate)

- A (-5, 3)
- B (5, -3)
- C (-3, 5)
- D (3, -5)

(1 mark)

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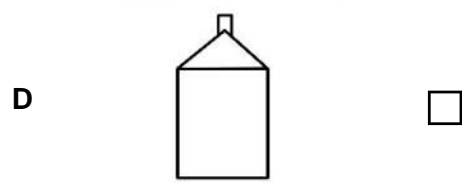
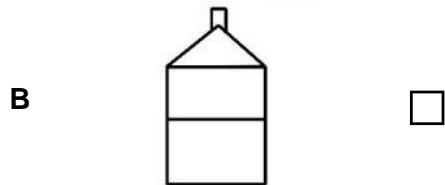
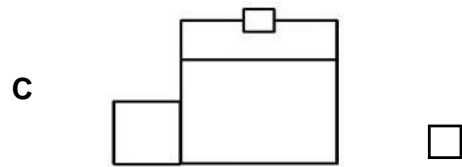
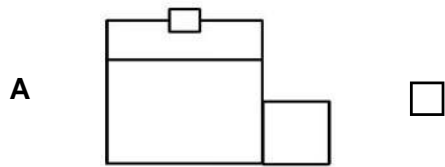
Q10



Only the features highlighted in green are on the front elevation

Which one of the following is the front elevation of the house from the view shown?

(tick one box)



(1 mark)

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Q11

A commuter uses a bus and a train to get to work.

The train is more than 5 minutes late $\frac{1}{6}$ of the times they use it

The bus is more than 5 minutes late $\frac{3}{5}$ of the times they use it

What is the probability that **both** the bus and train will be more than 5 minutes late?

Show your working

Bus late AND train late. AND means to multiply the probabilities, as they can be assumed to be independent events which are not effected by each other. To multiply fractions, multiply the numerators and multiply the denominators. The question does not ask to give the fraction in its simplest form so there should be no need to simplify

(2 marks)

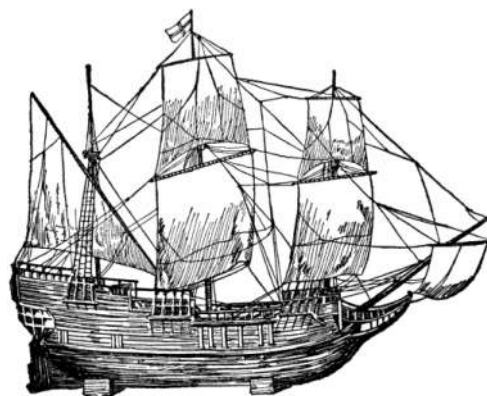
Q12

A model maker wants to make a model of a ship

He will use a scale of 1:50

The ship was 100ft long

1 foot = 0.3 m



How long will the model ship be in cm?

Show your working

50 is 50 times greater than 1. So dividing the real length by 50 works out how many feet long the model will be. Multiplying the result by 0.3 works out how many metres it will be. There are 100cm in 1m

_____ cm

(3 marks)

End of Section 1