

Please check the examination details below before entering your candidate information

Candidate surname

Other names

**Pearson Edexcel
Functional Skills**

Centre Number

Candidate Number

Practice Set 2

Time: 25 minutes

Paper Reference **PRACL2/N02**

Mathematics

Level 2

Section A (Non – Calculator)



You must have:

Pen, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses. Tracing paper may be used.

Total Marks

My signature confirms that I will not discuss the content of the test with anyone.

Signature: _____

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Sign the declaration.
- Answer **all** questions.
- Write your final answers in the boxes provided.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You **must** show clearly how you get your answers in the spaces provided. Marks will be awarded for your working out.
- Check your working and answers at each stage.
- Diagrams are **not** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**
- Take the value of π to be 3.14

Information

- The total mark for this section is 16.
- The marks for **each** question are shown in brackets.
– *use this as a guide as to how much time to spend on each question.*
- This sign shows where marks will be awarded for showing your checks.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ►

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.CG Maths.
Worked Solutions


Pearson

Please note that these worked solutions have neither been provided nor approved by Pearson Education 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 A

Answer ALL questions. Write your answers in the spaces provided.

1

(a) Work out $700 - 7^2$

(2)

$$\begin{array}{r} 700 \\ - 49 \\ \hline 651 \end{array}$$

The order of operations, BIDMAS, needs to be followed. So 7^2 needs to be done first. This means 7×7 which is 49. Then subtracting 49 from 700

651

Here is a list of numbers.

29 31 46 43 29 31 38 34 43 35 43

(b) Write down the mode of these numbers.

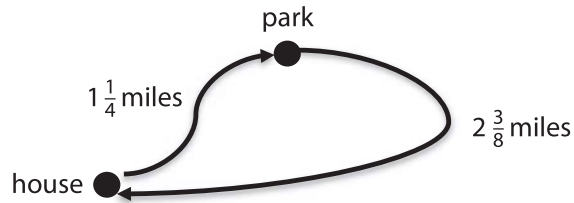
(1)

There are two 29s, two 31s, one 46, three 43s, one 38, one 34 and one 35. Therefore the mode is 43 as this is the number which appeared the most

43

(Total for Question 1 is 3 marks)

- 2 Ola will run from her house to a local park and back to her house. She sees this sketch of the route she will take.



What is the total distance of the route Ola will run?
Give your answer as a mixed number.

You **must** show your working.

$$1 + 2 = 3$$

Adding together the whole numbers

(3)

$$\frac{1}{4} + \frac{3}{8}$$

Adding together the fractions

$$\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$$

The denominators need to be the same so multiplying the numerator and denominator of $\frac{1}{4}$ by 2 to get $\frac{2}{8}$. Once they are the same, the numerators can be added

Adding together the 3 and the $\frac{5}{8}$ gives this as a mixed number

$$3\frac{5}{8} \text{ miles}$$

(Total for Question 2 is 3 marks)

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3 Saima is making a filling for a cake.

Saima mixes jam, sugar and soft cheese in the ratio 4 : 1 : 16

She uses 32 oz of soft cheese.

Saima knows that 1 oz is 28.3 grams.

(a) How many grams of jam does Saima need?

(3)

$$\frac{32}{16} \times 4$$

16 parts of the ratio represent the soft cheese. Dividing the 32oz of soft cheese by 16 works out what one part of the ratio represents. This gives 2oz. Then multiplying by 4 as there are this many parts representing the jam. This gives 8oz

$$\begin{array}{r} 28.3 \\ \times 8 \\ \hline 226.4 \end{array}$$

Converting the 8oz of jam into grams

226.4 g



(b) Use estimation to show a check of your answer.

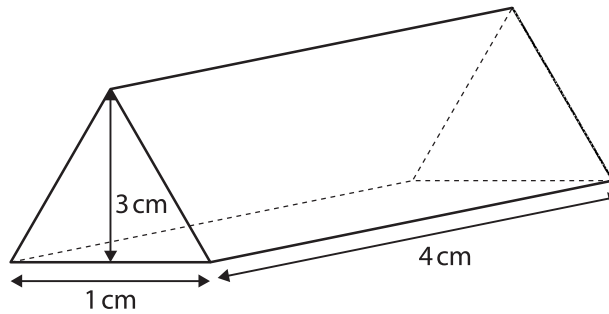
(1)

$$30 \times 8 = 240$$

28.3 is 30 to the nearest ten. Multiplying this by the 8oz gives 240g, which is close to 226.4

(Total for Question 3 is 4 marks)

- 4 Jack is a jeweller.
He makes a pendant in the shape of a triangular prism as shown in the diagram.



Jack makes the pendant from solid gold.

He uses this formula.

$$V = TL$$

where V = volume of a triangular prism (cm^3)

T = area of the triangular face (cm^2)

L = length of the prism (cm)

Jack knows that

- mass = density \times volume
- the density of gold is 19 grams per cm^3
- the cost of 1 gram of gold is £40

Jack sells the pendant for £382 more than the total cost of the gold needed to make the pendant.

How much does Jack sell the pendant for?

$$\frac{1}{2} \times 1 \times 3 \times 4$$

Area of triangle = $\frac{1}{2} \times$ base \times height. The base is 1cm and the height is 3cm. Multiplying this by the length of the prism, which is 4cm, gives the volume of gold used. The multiplication can be done in any order so doing the $\frac{1}{2} \times 4$ first gives 2. Then multiplying this by 3 gives 6. Then multiplying this by 1 gives 6

$$\begin{array}{r} 19 \\ \times 6 \\ \hline 114 \\ \times 40 \\ \hline 4560 \\ + 382 \\ \hline 4942 \end{array}$$

Mass = density \times volume. The density is 19 and the volume is 6. This works out that the mass of the gold used is 114g. Multiplying this by the cost of 1 gram of gold gives the cost of the gold used. Adding the £382 works out how much he sells the pendant for

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£ 4942

(Total for Question 4 is 6 marks)

TOTAL FOR SECTION A IS 16 MARKS