

Please write clearly in block capitals.

Centre number

Candidate number

Surname _____

Forename(s) _____

Candidate signature _____

INTERNATIONAL GCSE MATHEMATICS CORE

C

Paper 1C

Monday 20 May 2019

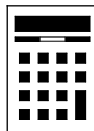
07:00 GMT

Time allowed: 1 hour 30 minutes

Materials

For this paper you must have:

- a calculator
- mathematical instruments.



Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.
- If your calculator does not have a π button, take the value of π to be 3.142

For Examiner's Use

Pages	Mark
2–3	
4–5	
6–7	
8–9	
10–11	
12–13	
14–15	
16–17	
18–19	
20–21	
22	
TOTAL	

Advice

- Show all necessary working; otherwise marks for method may be lost.



Answer **all** questions in the spaces provided.

- 1** Circle the number that is both a square number and a cube number.

[1 mark]

64

32

8

4

- 2** Solve $\frac{x}{3} = 12$

Circle your answer.

[1 mark]

$x = 4$

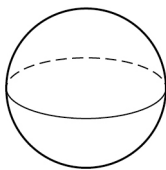
$x = 9$

$x = 15$

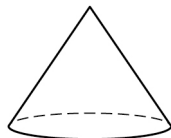
$x = 36$

- 3** Circle the **name** of the shape that is a prism.

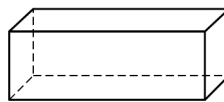
[1 mark]



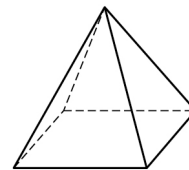
sphere



cone



cuboid



pyramid



4 Circle the word that describes $3x + 4$

[1 mark]

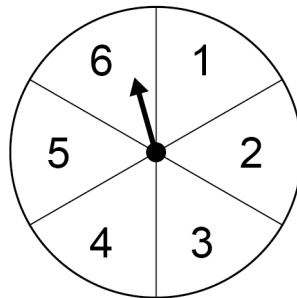
expression

formula

equation

term

5 Here is a fair spinner.



The spinner is spun.

Match each of these events to its position on the probability scale.

One has been done for you.

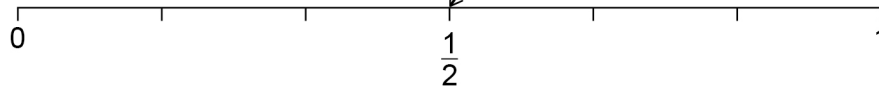
[3 marks]

The number
is 2

The number
is negative

The number
is odd

The number
is less than 6



6

Nate catches 5 fish.

He records their lengths in centimetres.

24.1

24.6

26.5

29.5

30.3

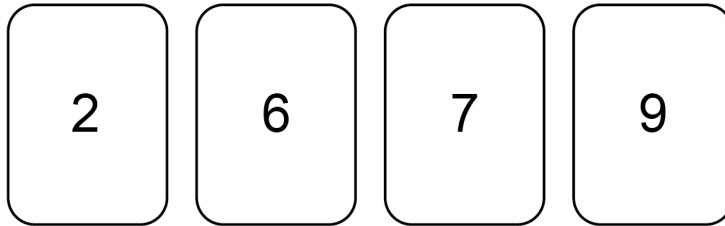
Which has the greater value, the mean or the median?

You **must** show your working.**[4 marks]**

Answer _____



7 Nadiya uses **all** of these four cards to make 4-digit numbers.



7 (a) Write down the largest **odd** number she can make.

[1 mark]

Answer _____

7 (b) Work out the smallest 4-digit number she can make that is a multiple of 6

[1 mark]

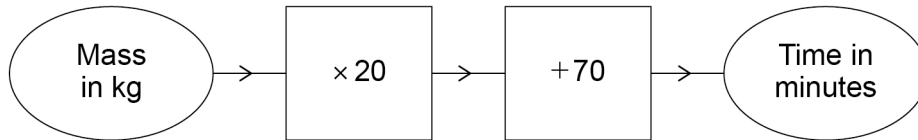
Answer _____

7 (c) Write down **all** the 4-digit numbers between 7500 and 9500 that she can make.

[2 marks]



- 8 Here is a rule for how long to cook a turkey in an oven.



A chef cooks a turkey of mass 3.25 kg

- 8 (a) How long will it take the chef to cook the turkey?

Give your answer in hours and minutes.

[2 marks]

Answer _____ hours _____ minutes

- 8 (b) The chef wants
to turn on the oven 20 minutes before he puts the turkey in
the turkey to be cooked by 7.30 pm

What is the latest time he should turn on the oven?

[2 marks]

Answer _____



- 9** 123 tourists go on a trip.
They use 12-seater minibuses and 17-seater minibuses.
All the minibuses are full.
How many of each type of minibus are used?

[3 marks]

Number of 12-seater minibuses _____

Number of 17-seater minibuses _____

- 10** Simplify $3b \times 2b$
Circle your answer.

[1 mark]

$5b^2$

$6b^2$

$5b$

$6b$

Turn over ►



11 Choose one of the following to make a correct statement each time.

[4 marks]

is less than

is equal to

is greater than

When $a = 5$ $3a$ _____ $a + 10$

When $b = 0$ $b - 6$ _____ $8b - 5$

When $c = -2$ c^2 _____ c

When $d = 0.3$ $\frac{2d}{3}$ _____ $\frac{1}{2}$ of d

12 The diameter of a circle is 10 cm

Which of these is the circumference in cm?

Circle your answer.

[1 mark]

10π

20π

25π

100π



13

A bag contains 40 tiles.

Each tile has 1, 2, 6 or 9 written on it.

A tile is chosen at random.

The probability that the tile has a 1 is $\frac{5}{40}$

The probability that the tile has an odd number is $\frac{13}{40}$

The probability that the tile has a 6 or a 9 is $\frac{11}{40}$

Complete the table.

[3 marks]

Number on tile	Frequency
1	5
2	
6	
9	

Turn over for the next question

Turn over ►



- 14 By rounding each number to 1 significant figure, estimate the value of

$$\frac{78 \times \sqrt{108}}{42}$$

You **must** show your working.

[2 marks]

Answer _____

- 15 Circle the scale which is the same as the ratio 1 : 100

[1 mark]

1 cm represents 1 km

1 cm represents 1 m

1 cm represents 100 km

1 cm represents 100 m



- 16** A linear sequence begins 20 14 8 ...
A different linear sequence begins 10 5 0 ...

What is the first number that is in **both** sequences?

[2 marks]

Answer _____

- 17** Multiply out $5(2a + 11b)$

[2 marks]

Answer _____

Turn over for the next question



18 An airline sells tickets for flights.
For each flight the airline sells
the first 20 tickets for \$55 each
all other tickets for \$80 each.
Choosing a seat costs \$15 extra.

18 (a) On one flight there are 27 passengers.
12 of the passengers pay the extra to choose their seat.
In total, how much do the passengers pay for their tickets and seats?

[3 marks]

Answer \$ _____



18 (b) On a different flight all the passengers pay the extra to choose their seats.
In total, the passengers pay \$5010

How many passengers are on the flight?

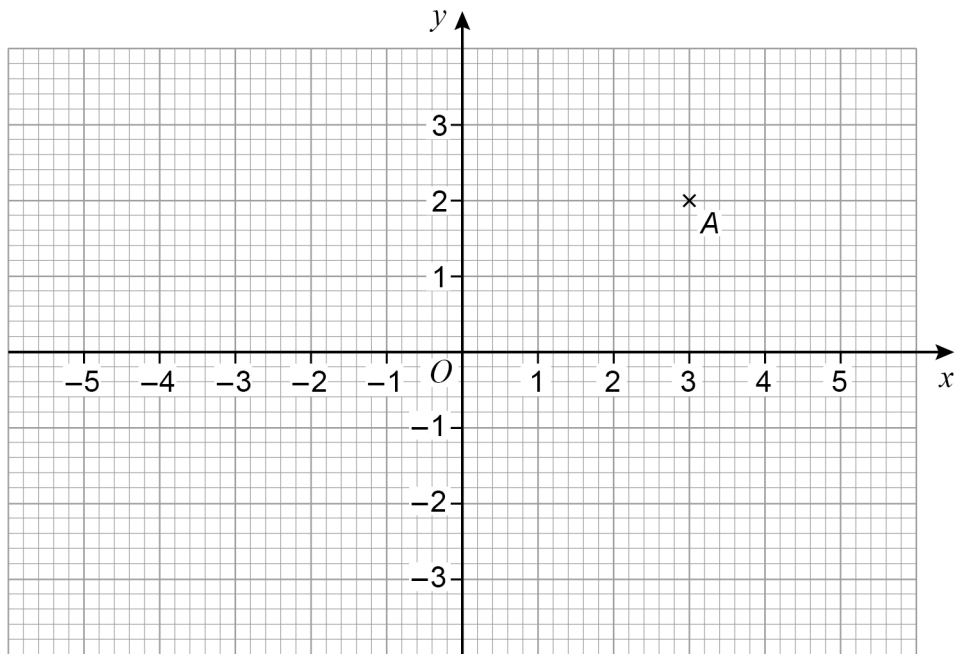
[3 marks]

Answer _____

Turn over for the next question



- 19** Point A has coordinates (3, 2)



- 19 (a)** A is translated by $\begin{pmatrix} -1 \\ -2 \end{pmatrix}$ to B.

Work out the coordinates of B.

[1 mark]

Answer (_____ , _____)

- 19 (b)** A is reflected in the line $x = -1$ to C.

Work out the coordinates of C.

[1 mark]

Answer (_____ , _____)



19 (c) A is rotated 90° clockwise about $(0, 0)$ to D .

Work out the coordinates of D .

[1 mark]

Answer (_____ , _____)

20 Solve $\frac{w+5}{6} - \frac{w}{3} = 2$

[3 marks]

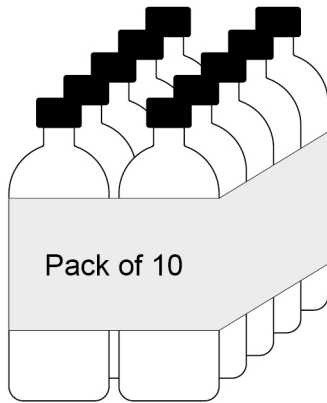
$w =$ _____

Turn over for the next question

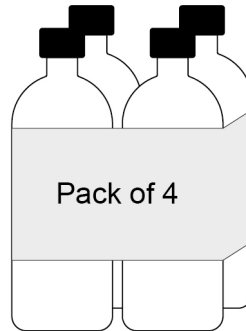


21

Bottles of water are sold in packs of 10 and packs of 4



\$6.50



\$2.68

Work out the cheapest cost of exactly 128 bottles.

[4 marks]

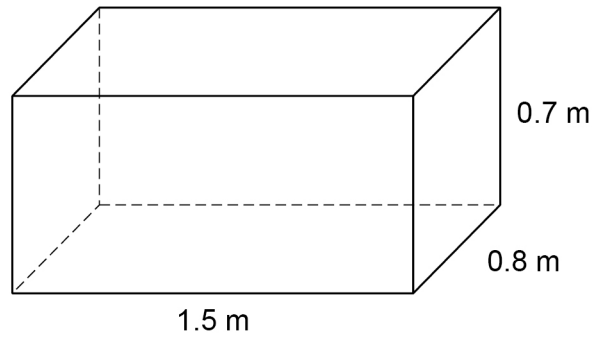
Answer \$ _____



22

Cheng has a wooden box with a lid.

The box is a cuboid.



He wants to paint
the outside of all six faces of the box
each face **three** times.

A 1-litre tin has enough paint for 4.5 m^2

How many 1-litre tins does he need to buy?

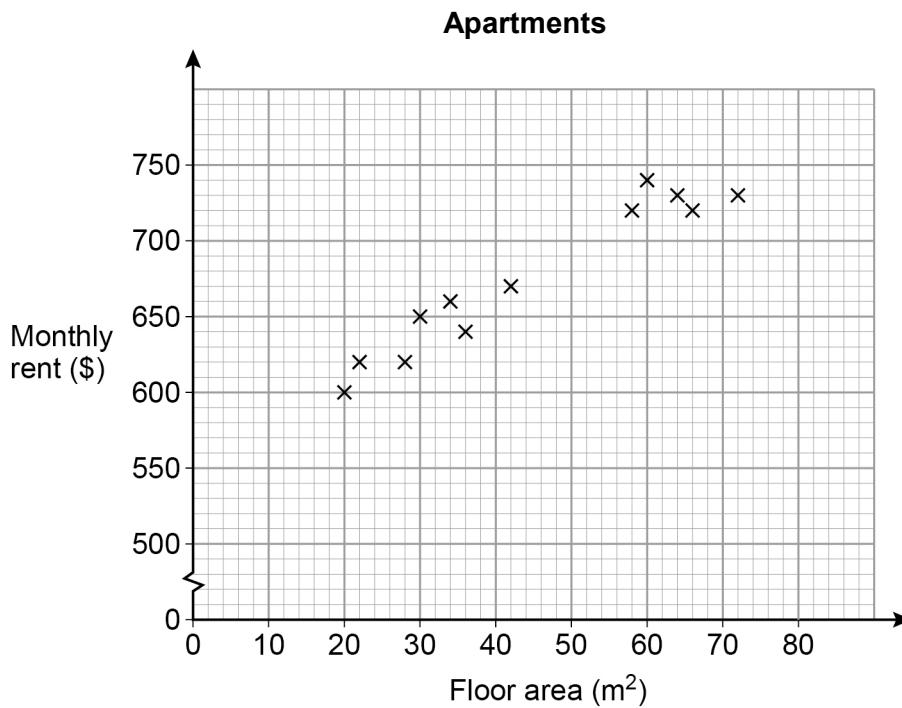
You **must** show your working.

[5 marks]

Answer _____



23 The scatter graph shows the floor areas and monthly rents of some apartments.



23 (a) Write down the type of correlation shown by the graph.

[1 mark]

Answer _____

23 (b) Zayn is going to rent an apartment with a floor area of 50 m²

Draw a line of best fit and use it to estimate his **yearly** rent.

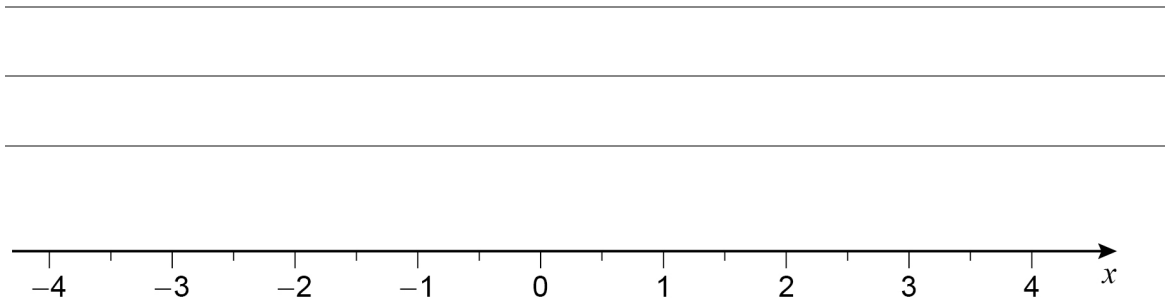
[3 marks]

Answer \$ _____



24 (a) On the number line, represent the solution set of $2x + 1 \geq 4$

[3 marks]



24 (b) Here are all the integer solutions to one of the four inequalities below.

$-3, -2, -1, 0, 1, 2$

Circle the correct inequality.

[1 mark]

$$-8 \leq 2y < 4$$

$$-8 \leq 2y \leq 4$$

$$-8 < 2y < 4$$

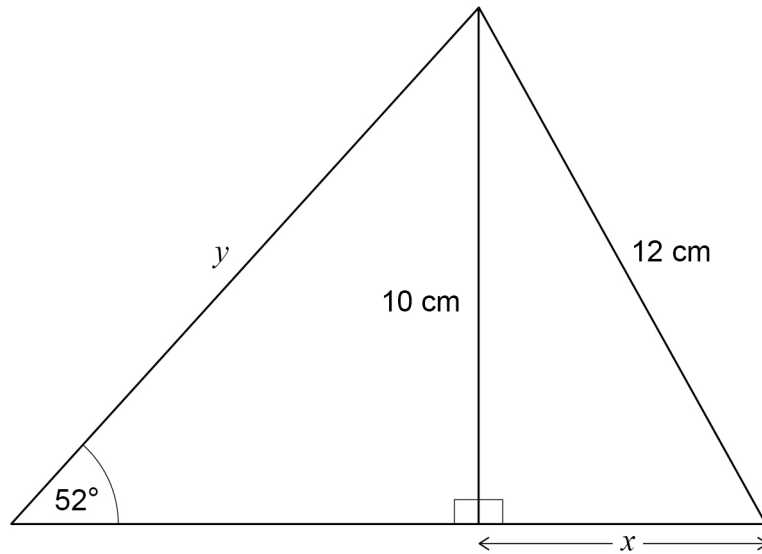
$$-8 < 2y \leq 4$$

Turn over for the next question



- 25** The diagram shows two right-angled triangles.

Not drawn
accurately



- 25 (a)** Work out the value of x .

[3 marks]

Answer _____ cm

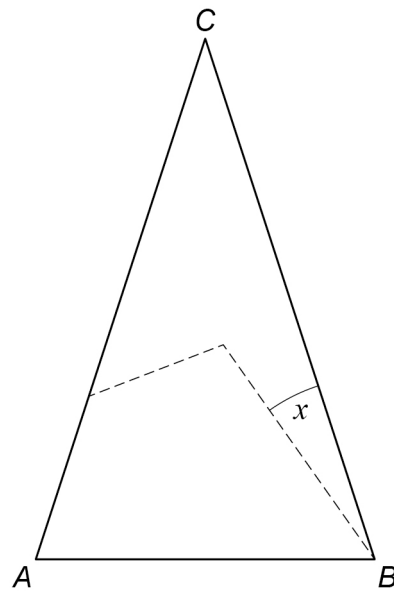
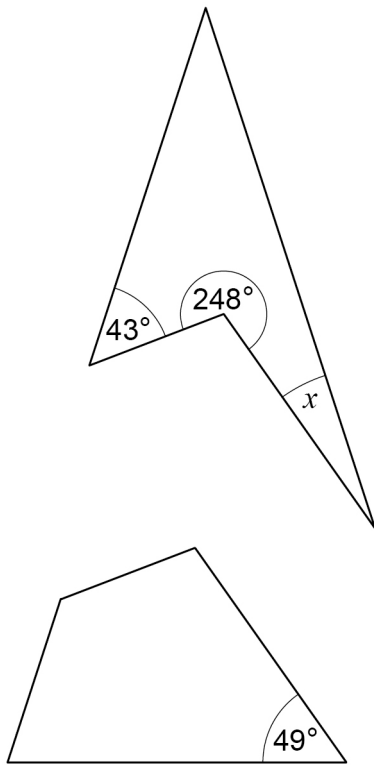
- 25 (b)** Work out the value of y .

[3 marks]

Answer _____ cm



26

Two quadrilaterals join to make isosceles triangle ABC as shown.Not drawn
accurately

$$AC = BC$$

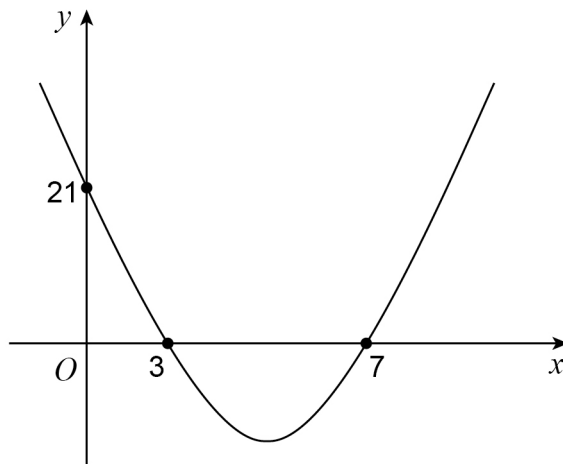
Work out the size of angle x .**[4 marks]**

Answer _____ °

Turn over ►



27 Here is a sketch of $y = x^2 - 10x + 21$



27 (a) Use the sketch to write down the roots of $x^2 - 10x + 21 = 0$

[1 mark]

Answer _____

27 (b) Work out the coordinates of the turning point.

[2 marks]

Answer (_____ , _____)

END OF QUESTIONS



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2 8



1 9 6 Y 9 2 6 0 / 1 C

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