Cambridge Assessment International Education

Cambridge IGCSE™ (9–1)

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

4698071514

MATHEMATICS **0980/11**

Paper 1 (Core) **October/November 2023**

1 hour

You must answer on the question paper.

You will need: Geometrical instruments

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You should use a calculator where appropriate.
- You may use tracing paper.
- You must show all necessary working clearly.
- Give non-exact numerical answers correct to 3 significant figures, or 1 decimal place for angles in degrees, unless a different level of accuracy is specified in the question.
- For π, use either your calculator value or 3.142.

INFORMATION

- The total mark for this paper is 56.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages. Any blank pages are indicated.

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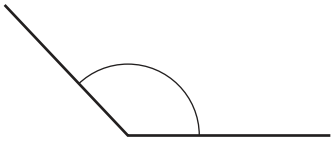
1



Write down the mathematical name for this type of angle.

..... [1]

2 Write down the value of the 8 in the number 58 317.

..... [1]

3 Complete these statements.

(a) When $x =$ ..... , $x + 3 = 8$.

[1]

(b) When $7y = 63$, $10y =$ .....

[1]

4 Find the value of $\sqrt[3]{5832}$.

..... [1]

5 A watch costs \$12 400.
In a sale there is a discount of 16%.

Calculate the amount of the discount.

\$ ..... [1]

6 **(a)** Mei writes down five integers.

- The lowest integer is 8.
- The range is 9.
- The median is 15.
- The total of the five integers is 66.
- There is no mode.

Write down the five integers.

..... , ... , ... , ... , ... [3]

(b) Huan writes down four numbers.
The mean of these four numbers is 17.

He writes down a fifth number.
The mean of these five numbers is 20.

Find the fifth number.

..... [3]

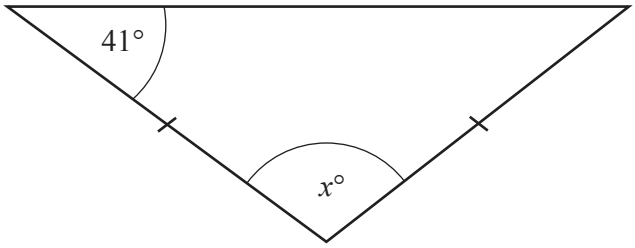
7 Arjun lives in Delhi and Haru lives in Tokyo.
They play a computer game online at the same time.

They start at 14 45 Tokyo local time.
The game lasts 3 hours 50 minutes.
The local time in Delhi is 3 hours 30 minutes behind the local time in Tokyo.

Find the local time in Delhi when the game finishes.

..... [2]

8 The diagram shows an isosceles triangle.



NOT TO SCALE

Find the value of x.

$x =$ ..... [2]

9 The stem-and-leaf diagram shows the time, in minutes, it takes each of 15 people to complete a race.

1	6 6 7
2	1 3 3 4 5 6 7 7 7
3	0 1 1

Key: 1 | 6 represents 16 minutes

Find

(a) the mode

..... min [1]

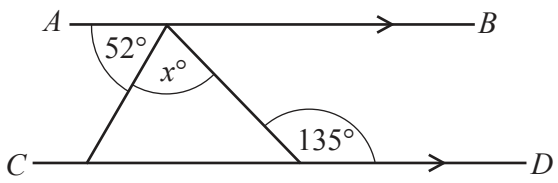
(b) the range

..... min [1]

(c) the median.

..... min [1]

10



NOT TO SCALE

AB and *CD* are parallel lines.

Find the value of x.

$x =$ ..... [2]

11 Write 0.03682 correct to 2 significant figures.

..... [1]

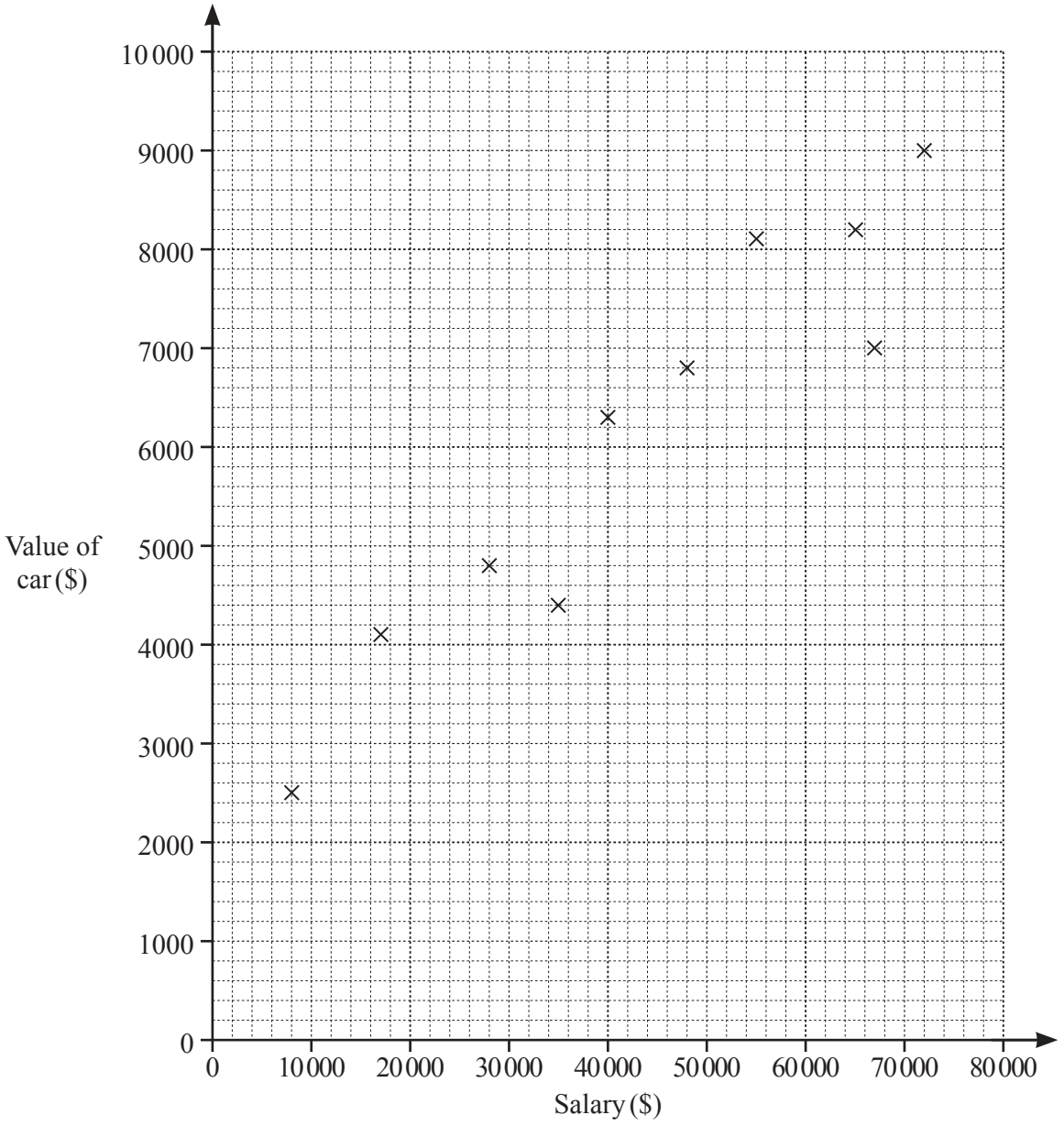
12 The table shows some information about Amir's shopping.

Fruit	Cost per kilogram	Number of kilograms Amir buys	Cost
Oranges	\$2.35	3.2	\$.....
Bananas	\$.....	2.8	\$.....
		Total	\$13.54

Complete the table.

[3]

13 For each of 10 people working in an office, the scatter diagram shows their salary and the value of their car.



(a) One of these people has a salary of $28 000.

Find the value of their car.

$ ..... [1]

(b) Another person starts to work in the office.
Their salary is $54 000 and the value of their car is $6100.

Plot this information on the scatter diagram. [1]

(c) What type of correlation is shown in the scatter diagram?

..... [1]

14 Factorise completely.

$$42mk - 35m$$

..... [2]

15 Find the highest common factor (HCF) of 140 and 126.

..... [2]

16 Simplify.

(a) $n^5 \times n$

..... [1]

(b) $8x^6 \div 2x^2$

..... [2]

17 The circumference of a circle is 59 cm.

Calculate the radius of the circle.

..... cm [2]

18 By writing each number in the calculation correct to 1 significant figure, find an estimate for the value of

$$\frac{36.9+24.2}{3.8-1.2}.$$

You must show all your working.

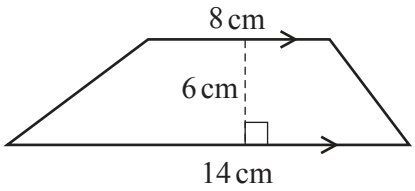
..... [2]

19 Indira invests \$6000 at a rate of r% per year simple interest.
At the end of 4 years the value of her investment is \$6840.

Find the value of r.

$r =$ ..... [3]

20



NOT TO SCALE

Find the area of this trapezium.

..... cm^2 [2]

21 **(a)** Write these numbers in standard form.

(i) 45 000

..... [1]

(ii) 0.0063

..... [1]

(b) Calculate $8.2 \times 10^{-1} \times 150\,000$.
Give your answer in standard form.

..... [2]

22 The length, s metres, of a ship is 287 m, correct to the nearest metre.

Complete this statement about the value of s.

..... $\leqslant s <$ ..... [2]

23 The table shows the number of people in a town who are left-handed and the number who are right-handed.

	Left-handed	Right-handed	Total
Number of people	8 400	48 600	57 000

Write down the probability that a person, chosen at random, is left-handed.

..... [1]

24 **(a)** Change $1.2\,m^2$ into mm^2.

..... mm^2 [1]

(b) The speed limit on a road is 80 km/h.
Sophie drives at a speed of 1200 m/min.

Show that Sophie drives at a speed lower than the speed limit.

[2]

25 Calculate the area of a semicircle with radius 10 cm.

..... cm^2 [2]

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