Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

MATHEMATICS **0580/11**

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

1 hour

You must answer on the question paper.

You will need: Geometrical instruments

INSTRUCTIONS

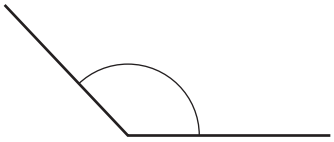
- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction 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 [ ].

© UCLES 2023

1



View solution

Write down the mathematical name for this type of angle.

..... [1]

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

View solution

..... [1]

3 Complete these statements.

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

View solution

[1]

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

View solution

[1]

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

View solution

..... [1]

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

View solution

Calculate the amount of the discount.

\$ ..... [1]

© UCLES 2023

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

View solution

- 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.

View solution

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.

View solution

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.

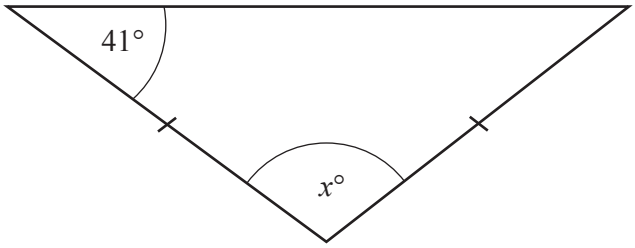
Find the local time in Delhi when the game finishes.

..... [2]

© UCLES 2023

8 The diagram shows an isosceles triangle.

View solution



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

View solution

..... min [1]

(b) the range

View solution

..... min [1]

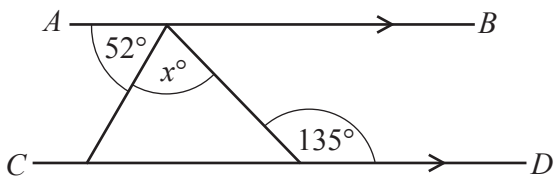
(c) the median.

View solution

..... min [1]

© UCLES 2023

10



NOT TO SCALE

View solution

AB and *CD* are parallel lines.

Find the value of x.

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

11 Write 0.03682 correct to 2 significant figures.

View solution

..... [1]

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

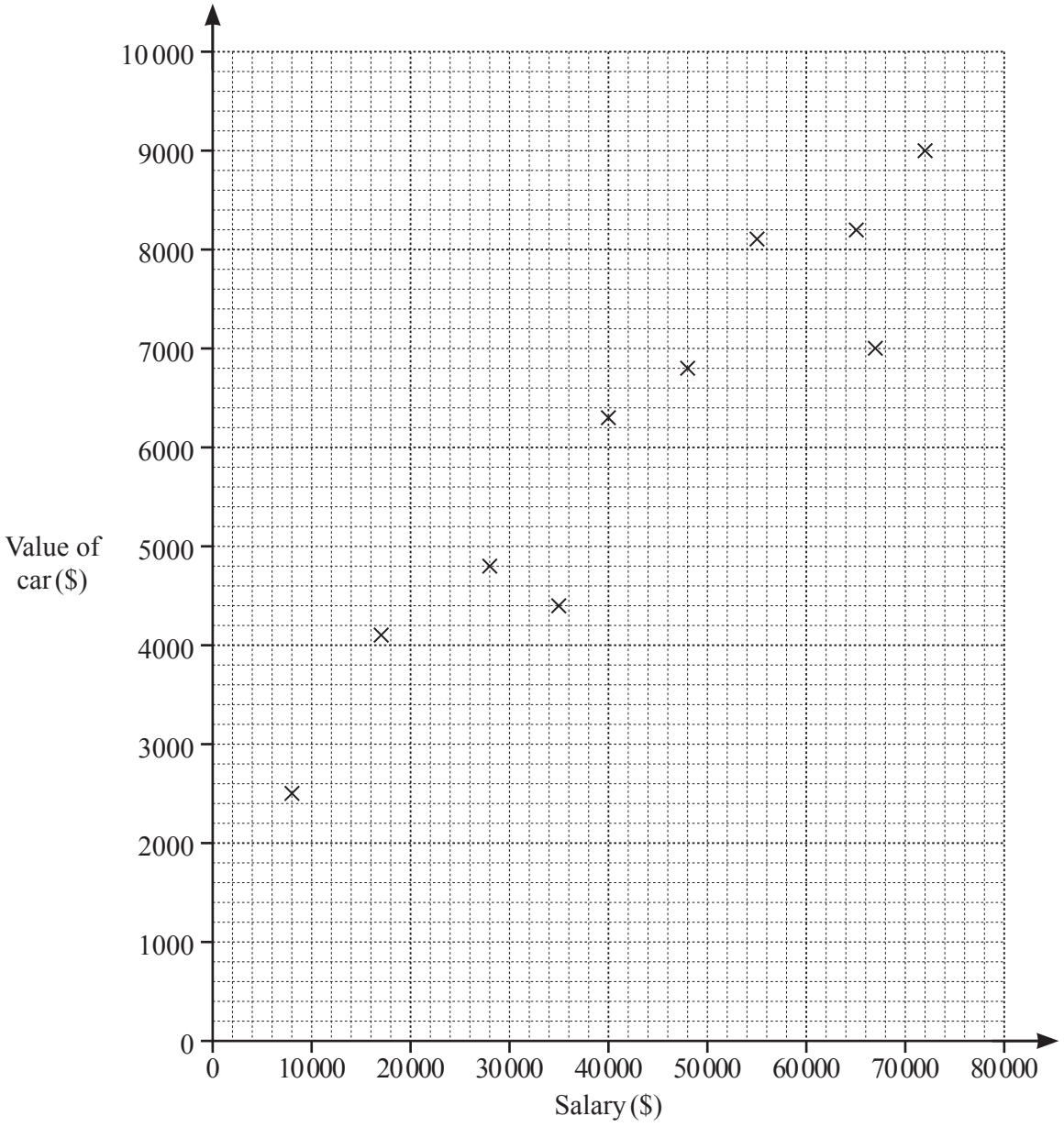
View solution

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.

View solution

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.

View solution

Plot this information on the scatter diagram. [1]

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

..... [1]

View solution

14 Factorise completely.

$$42mk - 35m$$

View solution

..... [2]

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

View solution

..... [2]

16 Simplify.

(a) $n^5 \times n$

View solution

..... [1]

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

View solution

..... [2]

17 The circumference of a circle is 59 cm.

View solution

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

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

View solution

You must show all your working.

..... [2]

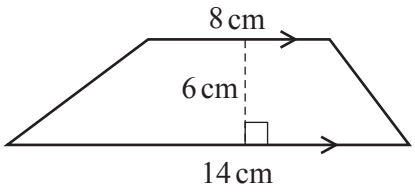
19 Indira invests \$6000 at a rate of r% per year simple interest.
At the end of 4 years the value of her investment is \$6840.

View solution

Find the value of r.

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

20



NOT TO SCALE

View solution

Find the area of this trapezium.

..... cm^2 [2]

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

View solution

(i) 45 000

..... [1]

View solution

(ii) 0.0063

..... [1]

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

View solution

..... [2]

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

View solution

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.

View solution

	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]

© UCLES 2023

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

View solution

..... mm^2 [1]

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

View solution

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

[2]

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

View solution

..... cm^2 [2]

BLANK PAGE

© UCLES 2023

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

© UCLES 2023