



Cambridge IGCSE™

CANDIDATE
NAME

--

CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--



MATHEMATICS

0580/01

Paper 1 (Core)

For examination from 2020

SPECIMEN PAPER

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. Blank pages are indicated.

1 Write seventeen thousand and seventeen in figures.

..... [1]

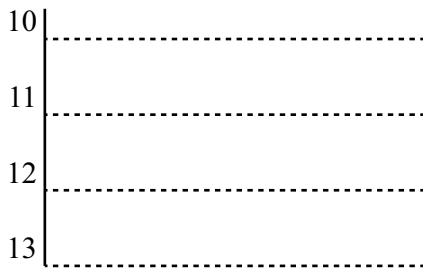
2 Find the number of minutes from 17 58 to 7.13 pm.

..... min [1]

3 The number of cars parked in a car park at 9 am is recorded for 10 days.

124 130 129 116 132 120 127 107 118 114

Complete the stem-and-leaf diagram.



Key: 12|3 represents 123 cars

[2]

4 (a) Write 6789 correct to the nearest 100.

..... [1]

(b) Write 6789 correct to 3 significant figures.

..... [1]

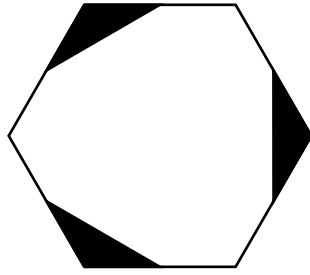
5 A cuboid measures 6 cm by 3 cm by 2 cm.

On this 1 cm^2 grid, draw a net of the cuboid.



[3]

6



(a) Write down the order of rotational symmetry of the shape.

..... [1]

(b) Draw all the lines of symmetry on the shape.

[1]

7 (a) Write down a fraction which is equivalent to $\frac{3}{5}$.

..... [1]

(b) Write down the reciprocal of 7.

..... [1]

8 A cube has a volume of 1000 cm^3 .

Calculate the surface area of the cube.

..... cm^2 [3]

9 Dan either walks or cycles to school.

The probability that he cycles to school is $\frac{1}{5}$.

(a) Write down the probability that Dan walks to school.

..... [1]

(b) There are 200 days in a school year.

Work out the expected number of days that Dan cycles to school in a school year.

..... [1]

- 10** Using a ruler and pair of compasses only, construct a triangle with sides 5 cm, 8 cm and 10 cm. Leave in your construction arcs.

[2]

- 11** Here is a list of numbers.

Put a ring around the number with the largest value.

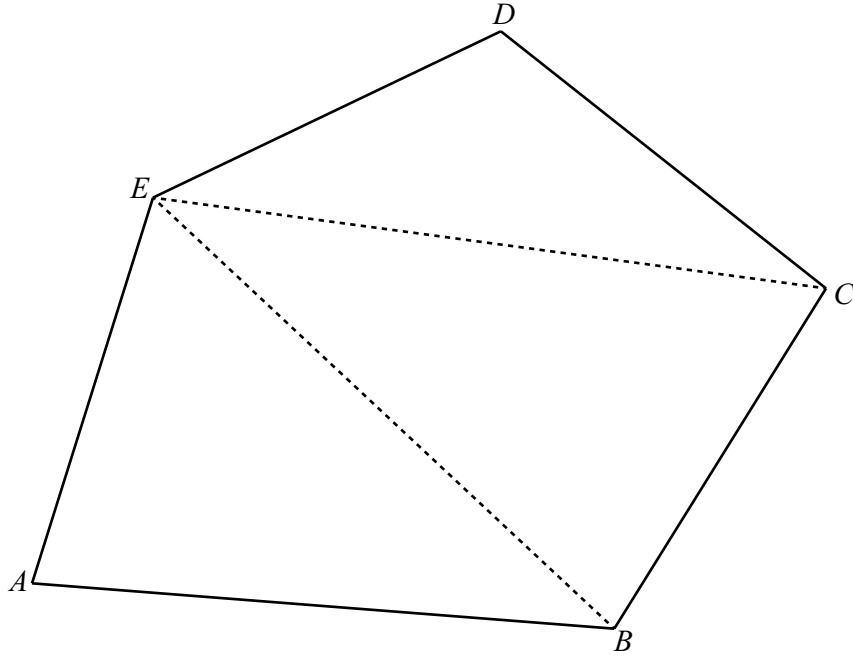
0.3030 $\frac{1}{3}$ 0.0330 $\frac{3}{10}$ 33% [1]

- 12** Complete these statements.

(a) 6 m is the same length as mm. [1]

(b) 7000 cm² is the same area as m². [1]

13



$ABCDE$ is a pentagon.

Explain why the diagram shows that the sum of the interior angles of a pentagon is 540° .
Do not measure any angles.

..... [1]

14 Simplify $x^3y^4 \times x^5y^3$.

..... [2]

15 Write 2020 in standard form.

..... [1]

16 Kim knows that one angle of an isosceles triangle is 48° .
He says that one of the other angles **must** be 66° .

Explain why Kim is wrong.

.....

..... [2]

17 Explain why $\sqrt{3}$ is irrational.

..... [1]

18 The mass, m kilograms, of a horse is 429 kg, correct to the nearest kilogram.

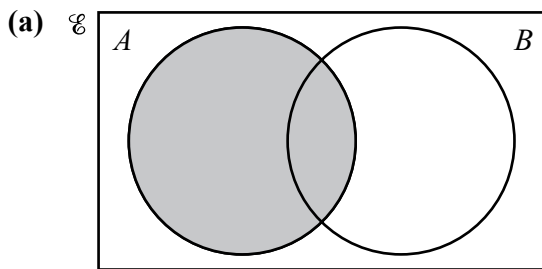
Complete this statement about the value of m .

..... $\leq m <$ [2]

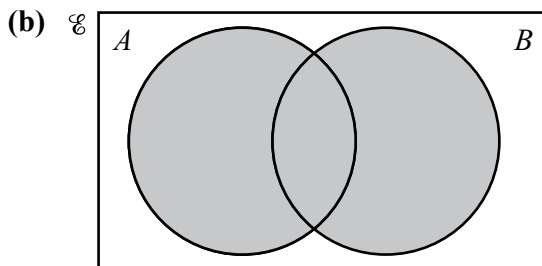
19 Rearrange the formula $5w - 3y + 7 = 0$ to make w the subject.

$w =$ [2]

20 Use set notation to describe the shaded regions in each Venn diagram.



..... [1]



..... [1]

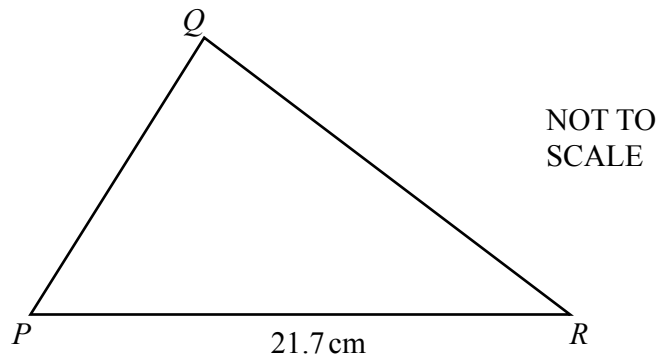
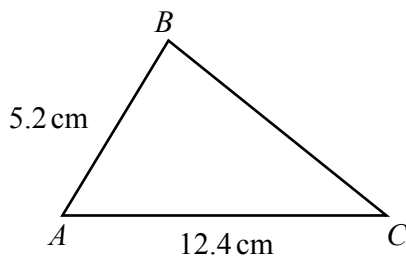
- 21 The radius of a sphere is 5.2 cm.

Work out the surface area of this sphere.

[The surface area, A , of a sphere with radius r is $A = 4\pi r^2$.]

.....cm² [2]

- 22 Triangle ABC is similar to triangle PQR .



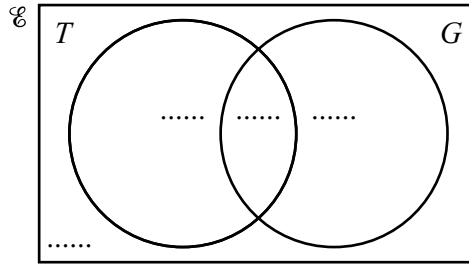
Find PQ .

$PQ =$ cm [2]

- 23 $\mathcal{E} = \{\text{children who go to the park}\}$
 $T = \{\text{children who play tennis}\}$
 $G = \{\text{children who play golf}\}$

120 children go to the park.
 50 play tennis.
 75 play golf.
 25 do not play tennis or golf.

- (a) Complete the Venn diagram.



[2]

- (b) Find $n(T \cap G)$.

..... [1]

- 24 (a) Factorise completely $18x - 24$.

..... [1]

- (b) Simplify $(w^5)^4$.

..... [1]

25 Without using your calculator, work out $1\frac{7}{12} + \frac{13}{20}$.

You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

26 By rounding each number correct to 1 significant figure, estimate the value of $\sqrt{\frac{90\,006}{10.01^2}}$.

You must show all your working.

..... [2]

27 (a) The n th term of a sequence is $n^3 - 5$.

Write down the first three terms of this sequence.

.....,, [2]

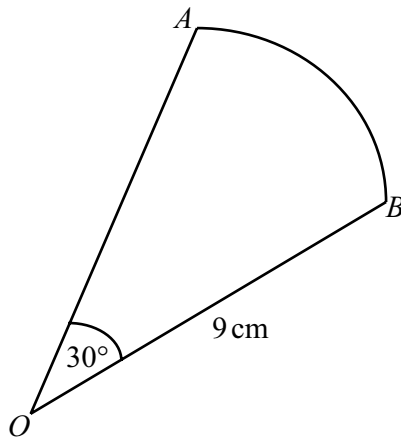
(b) Here is a sequence of numbers.

3, 6, 11, 18, 27, ...

Find an expression for the n th term of this sequence.

..... [2]

28



NOT TO
SCALE

OAB is a sector of a circle with radius 9 cm and centre O .
The angle at O is 30° .

Calculate the area of this sector.
Give your answer in terms of π .

..... cm^2 [2]

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.

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