Write your name, centre number and candidate number in the boxes below.

Surname	Other names

Centre number | | | | | |

Candidate number | | | | |

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Shapes, solids and congruence

Time allowed: 30 minutes

Subject code **0580**

Mathematics

Questions from Paper 1, Paper 2 and Paper 3

You must have: a ruler marked in centimetres and millimetres, a protractor, compasses, a pen, an HB pencil and an eraser.
You may use a calculator.

Total marks

/ 23

Instructions

- Answer every question in the space provided on this paper.
- Write in black or dark blue ink. Pencil may be used for diagrams and graphs.
- Fill in your name, centre number and candidate number above.
- Show your working: a correct method can earn marks even if the answer is wrong.
- Unless a question says otherwise, give answers that are not exact to 3 significant figures, and angles in degrees to 1 decimal place.

Information

- This paper has 10 questions worth 23 marks in total.
- The marks for each question or part are shown in brackets, for example [3].

Advice

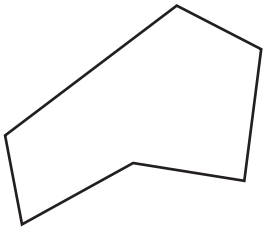
- Read every question through once before you write anything.
- Use the marks in brackets to judge how long to spend on each part.
- If you finish early, go back and check your working.

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Turn over ►

Print at 100% (Actual size) so diagrams keep their real measurements.

1



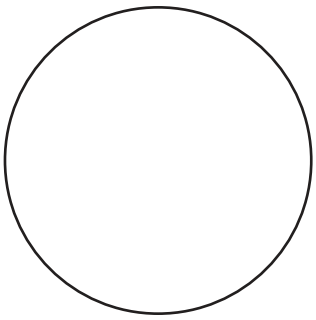
Write down the mathematical name of this polygon.

..... [1]

2D shapes Click for more variations

1	Hexagon	**1**	

2 **(a)**



The diagram shows a circle.

On the diagram, draw a chord. [1]

(b) Another circle has a diameter of 28 cm.

Find the radius of this circle.

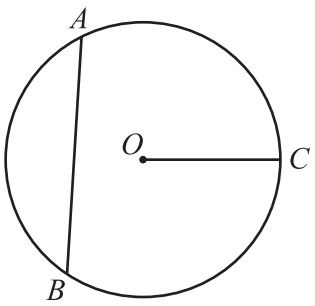
..... cm [1]

(a) 2D shapes (b) Area and circumference of circles Click for more variations

2(a)	Chord drawn	**1**	
2(b)	14	**1**	

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3 A, B and C are points on a circle, centre O.



(a) Write down the mathematical name for line OC.

..... [1]

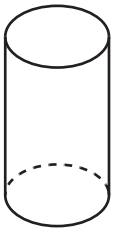
(b) Write down the mathematical name for line AB.

..... [1]

(a) 2D shapes (b) 2D shapes Click for more variations

3(a)	radius	**1**	
3(b)	chord	**1**	

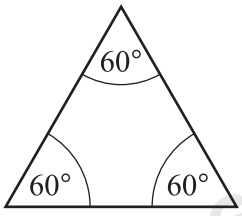
4 **(a)**



Write down the mathematical name of this solid.

..... [1]

(b)



Write down the mathematical name of this type of triangle.

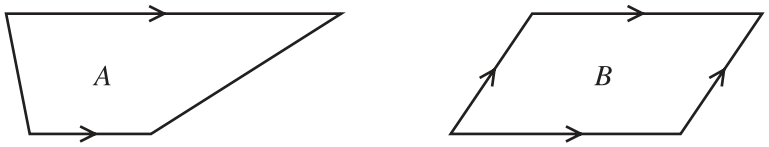
..... [1]

(a) 3D shapes (b) 2D shapes Click for more variations

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4(a)	Cylinder	**1**	
4(b)	Equilateral	**1**	

5



Write down the geometrical name for

(a) shape *A*, *Answer(a)* ..... [1]

(b) shape *B*. *Answer(b)* ..... [1]

(a) 2D shapes (b) 2D shapes Click for more variations

5	**(a)** Trapezium **(b)** Parallelogram	**1** **1**	Do not allow Trapezoid

6 **(a)** Shape *A* is a quadrilateral with only one pair of parallel lines.

Write down the mathematical name of shape *A*.

..... [1]

(b) Shape *B* is a quadrilateral with

- two pairs of parallel lines
- all four sides equal
- no right angles.

Write down the mathematical name of shape *B*.

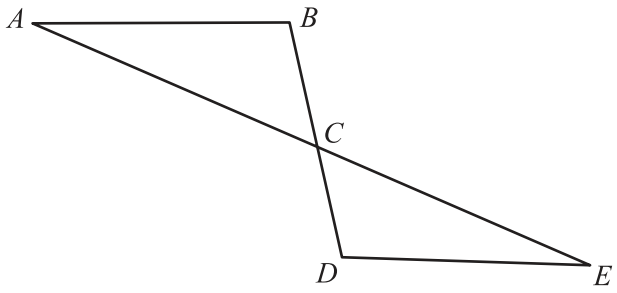
..... [1]

(a) 2D shapes (b) 2D shapes Click for more variations

6(a)	trapezium	**1**	
6(b)	rhombus	**1**	

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7



NOT TO SCALE

The diagram shows two straight lines, *AE* and *BD*, intersecting at *C*.
Angle *ABC* = angle *EDC*.
Triangles *ABC* and *EDC* are congruent.

Write down **two** properties of line segments *AB* and *DE*.

Answer AB and *DE* are .....

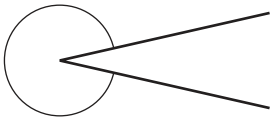
and ..... [2]

Congruence Click for more variations

7	Parallel Same length	**1** **1**	

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8 (a)



What type of angle is shown by the arc on the diagram?

Answer(a) ..... [1]

(b) *ABCD* is a quadrilateral.

- *AB* is parallel to *DC*.
- *BC* is longer than *AD*.

(i) Draw a possible quadrilateral *ABCD*.

Answer(b)(i)

[1]

(ii) Write down the geometrical name for the quadrilateral *ABCD*.

Answer(b)(ii) ..... [1]

(a) Basic angle properties (b)(i) 2D shapes (b)(ii) 2D shapes Click for more variations

8 (a)	Reflex	**1**	
(b) (i)	Drawing of a trapezium	**1**	Ignore labels and no arrows as long as a reasonable sketch.
(ii)	Trapezium	**1**	

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9 **(a)** Here is a description of a quadrilateral.

It has 4 right angles.
It has 2 lines of symmetry.
It has rotational symmetry of order 2.

Write down the mathematical name of this quadrilateral.

..... [1]

(b) Write down two geometrical properties of a parallelogram.

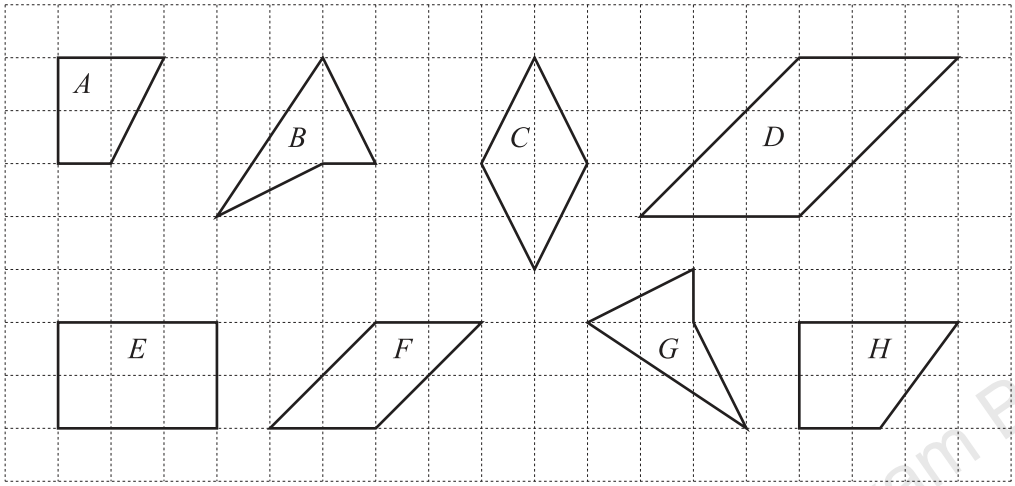
1. .....

2. ..... [2]

(a) 2D shapes (b) 2D shapes Click for more variations

9(a)	Rectangle	**1**	
9(b)	Two correct properties e.g. 2 pairs of parallel sides Opposite angles are equal Opposite sides are same length Rotational symmetry order 2 Diagonals are not equal	**2**	**B1** for one correct property

10



The diagram shows some quadrilaterals.

Complete the statements.

(a) Quadrilateral ..... is a rhombus. [1]

(b) Quadrilateral *A* is a ..... [1]

(c) Quadrilaterals ..... and ..... are congruent. [1]

(d) Quadrilaterals ..... and ..... are similar. [1]

(a) 2D shapes (b) 2D shapes (c) Congruence (d) Similarity Click for more variations

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10(a)	*C*	**1**	
10(b)	Trapezium	**1**	
10(c)	*B* and *G*	**1**	Both correct
10(d)	*D* and *F* or *B* and *G*	**1**	Both correct

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