

# Angles in Polygons

## Difficulty: Easy

### Question Paper 1

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Geometry
Sub-Topic	Angles in Polygons
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 1

**Time allowed:** 43 minutes

**Score:** /33

**Percentage:** /100

#### Grade Boundaries:

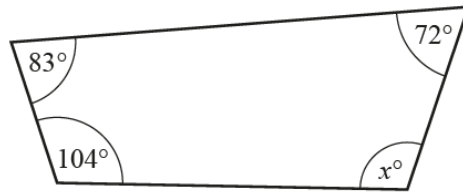
##### CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

##### CIE IGCSE Maths (0980)

9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

## Question 1



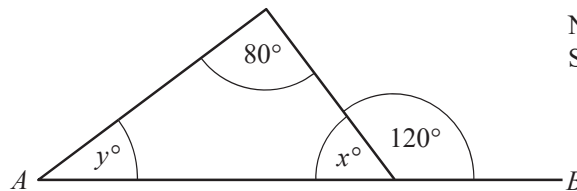
NOT TO  
SCALE

The diagram shows a quadrilateral.

Find the value of  $x$ .

[1]

## Question 2



NOT TO  
SCALE

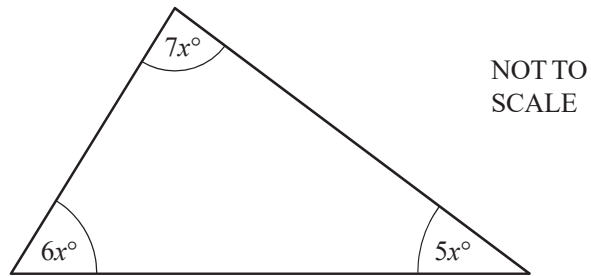
In the diagram,  $AB$  is a straight line.

Find the value of  $x$  and the value of  $y$ .

[2]

### Question 3

The three angles in a triangle are  $5x^\circ$ ,  $6x^\circ$  and  $7x^\circ$ .



(a) Find the value of  $x$ . [2]

(b) Work out the size of the largest angle in the triangle. [1]

### Question 4

Five angles of a hexagon are each  $115^\circ$ .

Calculate the size of the sixth angle. [3]

## Question 5

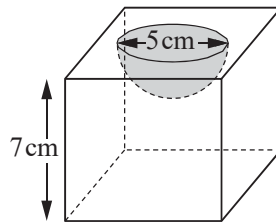
A regular polygon has an interior angle of  $172^\circ$ .

Find the number of sides of this polygon.

[3]

## Question 6

A solid consists of a metal cube with a hemisphere cut out of it.



NOT TO  
SCALE

The length of a side of the cube is 7 cm.

The diameter of the hemisphere is 5 cm.

Calculate the volume of this solid.

[The volume,  $V$ , of a sphere with radius  $r$  is  $V = \frac{4}{3}\pi r^3$ .]

[3]

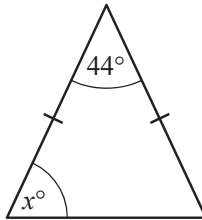
## Question 7

Find the sum of the interior angles of a 25-sided polygon.

[2]

## Question 8

(a)



NOT TO  
SCALE

The diagram shows an isosceles triangle.

Find the value of  $x$ .

[1]

(b) The exterior angle of a regular polygon is  $24^\circ$ .

Find the number of sides of this regular polygon.

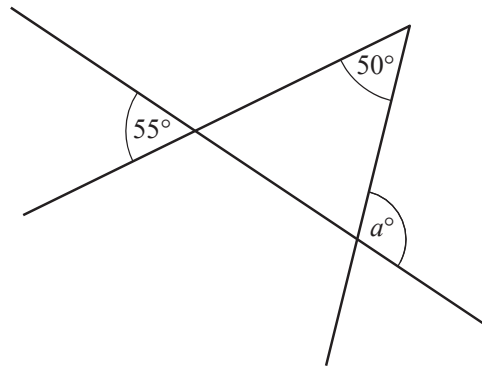
[2]

### Question 9

Find the interior angle of a regular polygon with 18 sides.

[3]

### Question 10

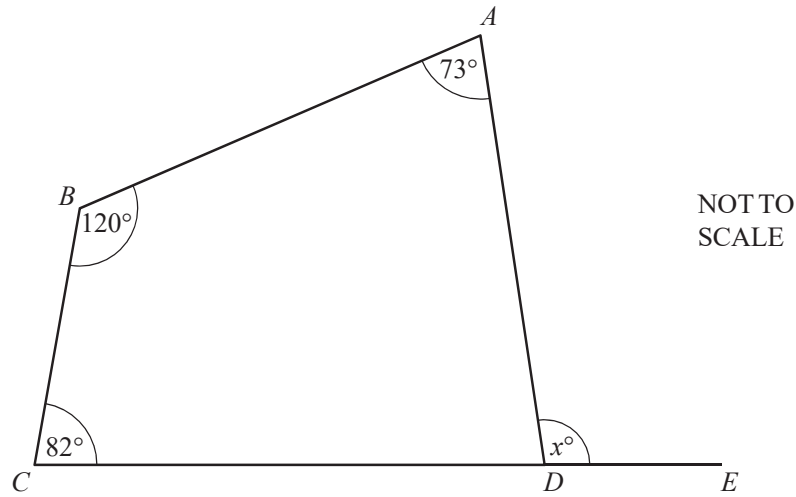


NOT TO  
SCALE

Use the information in the diagram to find the value of  $a$ .

[2]

### Question 11

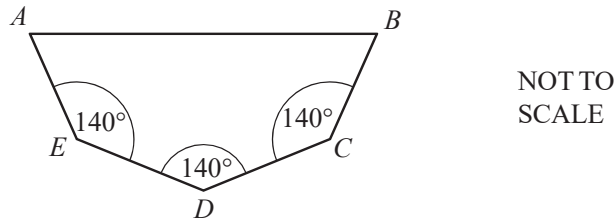


The diagram shows a quadrilateral  $ABCD$ .  
 $CDE$  is a straight line.

Calculate the value of  $x$ .

[2]

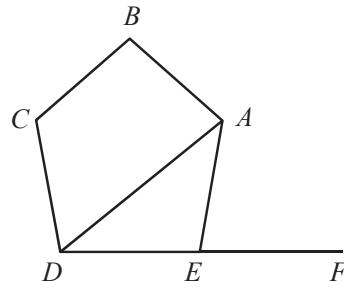
### Question 12



The pentagon has three angles which are each  $140^\circ$ .  
The other two interior angles are equal.  
Calculate the size of one of these angles.

[3]

### Question 13



NOT TO  
SCALE

$ABCDE$  is a regular pentagon.

$DEF$  is a straight line.

Calculate

(a) angle  $AEF$ ,

[2]

(b) angle  $DAE$ .

[1]