

# Angles in Polygons

## Question Paper

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Angles in Polygons
Grade Level	Grade 4
Booklet	Question Paper

**Time Allowed:** 45 minutes

**Score:** /37

**Percentage:** /100

**Grade Boundaries:**

1. Each exterior angle of a regular polygon is  $30^\circ$ .

Work out the number of sides of the polygon.

.....

**(2 marks)**

2.

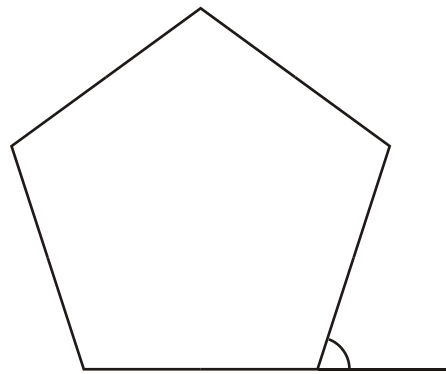


Diagram **NOT**  
accurately drawn

Work out the size of an exterior angle of a regular pentagon.

.....<sup>o</sup>

**(2 marks)**

3.

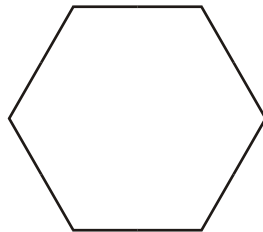


Diagram **NOT**  
accurately drawn

Calculate the size of the exterior angle of a regular hexagon.

.....<sup>o</sup>

**(2 marks)**

4. The size of each exterior angle of a regular polygon is  $40^\circ$ .

Work out the number of sides of the regular polygon.

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**(2 marks)**

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5. The size of each interior angle of a regular polygon is  $156^\circ$ .

Work out the number of sides of the polygon.

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**(3 marks)**

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6. Here is a regular polygon with 9 sides.

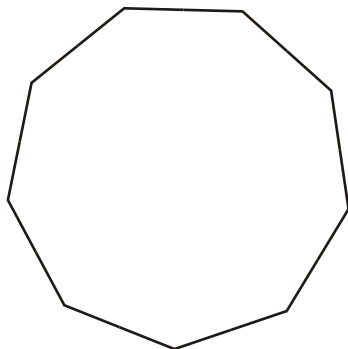


Diagram **NOT** accurately drawn

Work out the size of an exterior angle.

.....<sup>o</sup>

**(2 marks)**

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7.

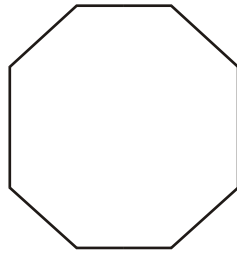


Diagram **NOT** accurately drawn

(a) Work out the size of each interior angle of a regular octagon.

.....

(3)

The size of each exterior angle of a regular polygon is  $30^\circ$

(b) Work out the number of sides of the polygon.

.....

(2)

**(5 marks)**

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8.

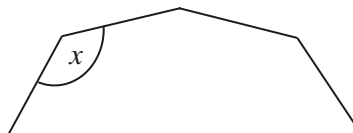


Diagram **NOT** accurately drawn

The diagram shows part of a **regular** 10-sided polygon.

Work out the size of the angle marked  $x$ .

.....<sup>o</sup>

**(3 marks)**

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9.

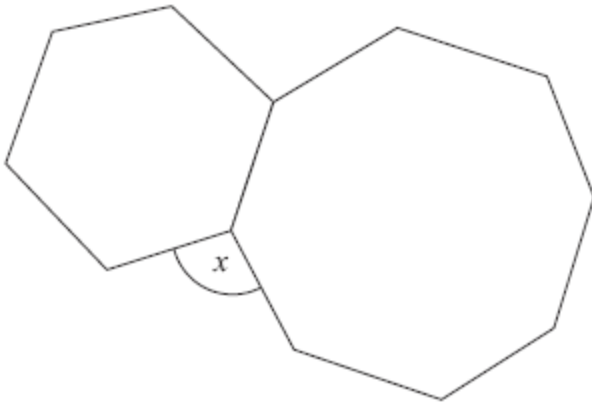


Diagram **NOT**  
accurately drawn

The diagram shows a regular hexagon and a regular octagon.

Calculate the size of the angle marked  $x$ .  
You must show all your working.

.....<sup>o</sup>

**(4 marks)**

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10.

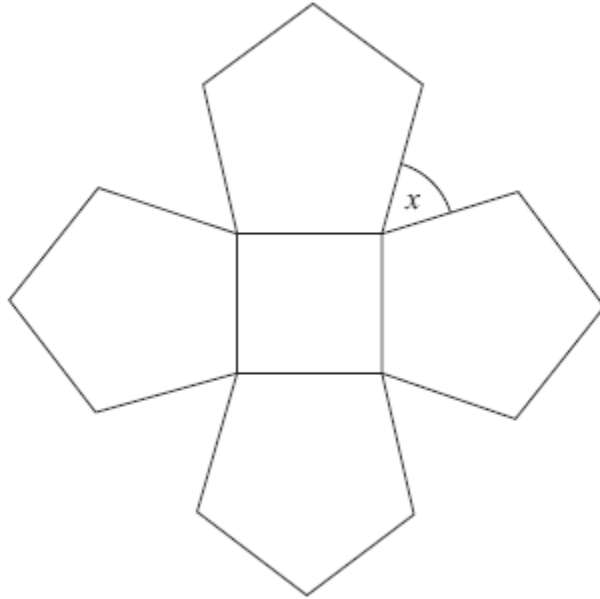


Diagram **NOT**  
accurately drawn

The diagram shows a square and 4 regular pentagons.

Work out the size of the angle marked  $x$ .

..... °

**(4 marks)**



11.

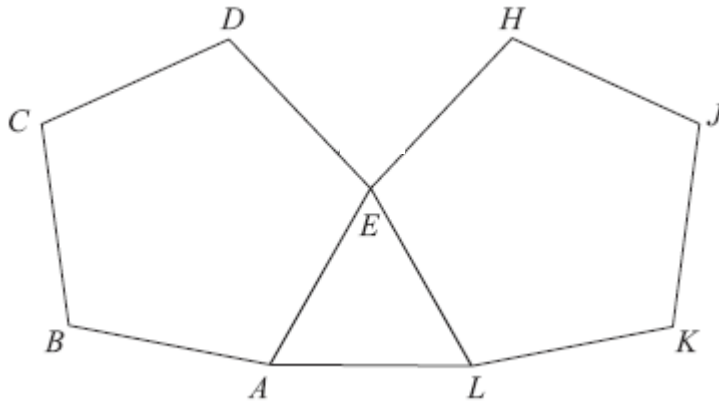


Diagram **NOT**  
accurately drawn

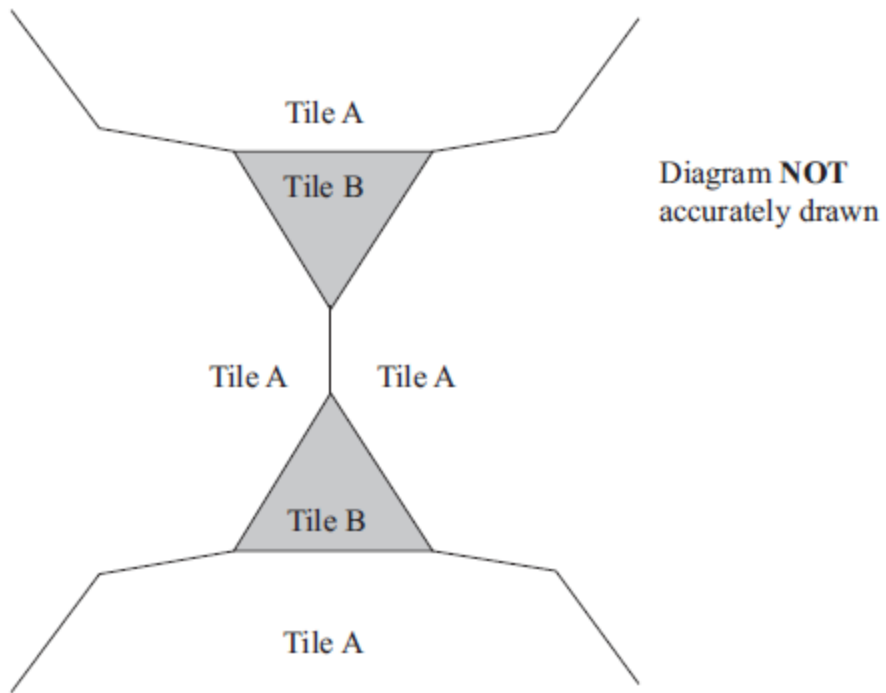
$ABCDE$  and  $EHJKL$  are regular pentagons.  
 $AEL$  is an equilateral triangle.

Work out the size of angle  $DEH$ .

.....<sup>o</sup>  
(4 marks)

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12. The diagram shows part of a pattern made from tiles.



The pattern is made from two types of tiles, tile A and tile B.

Both tile A and tile B are regular polygons.

Work out the number of sides tile A has.

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(4 marks)

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