# Polygons

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#### 1) November 2011 V1

6



The front of a house is in the shape of a hexagon with two right angles. The other four angles are all the same size.

Calculate the size of one of these angles.

Answer [3]

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#### 2) November 2010 V2





3) June 2012 V3				
1				
73°				
B NOT TO SCALE				
$C$ $(x^{\circ})$ $D$ $E$				
The diagram shows a quadrilateral <i>ABCD</i> CDE is a straight line.				
Calculate the value of <i>x</i> .				
Answer x = [2]				
4) November 2012 V2				
46°) NOT TO				
SCALE				
The diagram shows two of the exterior angles of a regular polygon with $n$ sides.				
Calculate n.				
Answer $n = [2]$				
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#### 5) November 2013 V2

9 The exterior angle of a regular polygon is  $36^{\circ}$ .

What is the name of this polygon?

#### 6) November 2014 V3

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

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### 7) November 2015 V3

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



9) March	2016 V2			
18				
	(b)	85°		
		97°	NOT TO SCALE	
	Find the value of y.			
			<i>y</i> =	[2]
<u>10) June</u>	2016 V1			
17	Five angles of a hexage	on are each 115°.		
	Calculate the size of th	e sixth angle.		
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#### 11) June 2016 V2

9 A regular polygon has an interior angle of 172°.

Find the number of sides of this polygon.



13

The diagram is made from 5 congruent kites.

Work out the value of

(a) x,

**(b)** *y* 

*y* = .....[2]

[3]

NOT TO SCALE

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## 13) November 2016 V3 15 (a) NOT TO SCALE C44° B Triangle *ABC* is an isosceles triangle with AB = CB. Angle $ABC = 44^{\circ}$ . Find angle ACB. Angle *ACB* = ......[1] (b) A regular polygon has an exterior angle of $40^{\circ}$ . Work out the number of sides of this polygon. www.Q8 Maths.com

14) November 2017 V2	
17	
$29x^{\circ}$ $x^{\circ}$	NOT TO SCALE
The diagram shows part of a regular polygon. The exterior angle is $x^{\circ}$ . The interior angle is $29x^{\circ}$ .	
Work out the number of sides of this polygon	
	[3]
15) November 2020 V2	
8 Calculate the size of one interior angle of a regular polygon with 40 sides.	
	[2]

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