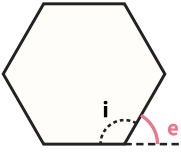


Angles in Regular Polygons

1

A regular hexagon has 6 sides. Find (a) the exterior angle e and (b) the interior angle i .



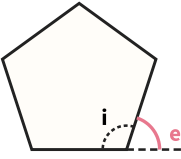
exterior angles of any polygon add to 360°
 $e = 360^\circ \div 6$

(a) _____ (b) _____

Answer _____

2

A regular pentagon has 5 sides. Find (a) the exterior angle e and (b) the interior angle i .



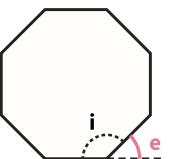
$e = 360^\circ \div 5$

(a) _____ (b) _____

Answer _____

3

A regular octagon has 8 sides. Find (a) the exterior angle e and (b) the interior angle i .

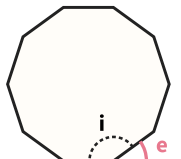


(a) _____ (b) _____

Answer _____

4

A regular decagon has 10 sides. Find (a) the exterior angle e and (b) the interior angle i .

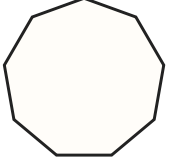


(a) _____ (b) _____

Answer _____

5

A regular nonagon has 9 sides. Find (a) the exterior angle e and (b) the interior angle i .

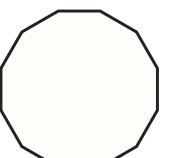


(a) _____ (b) _____

Answer _____

6

A regular dodecagon has 12 sides. Find (a) the exterior angle e and (b) the interior angle i .



(a) _____ (b) _____

Answer _____

7

Each exterior angle of a regular polygon is 30° . How many sides does the polygon have?

Answer _____

8

Can a regular polygon have an exterior angle of 50° ? Explain how you know.

Answer _____

Angles in Regular Polygons *further practice*

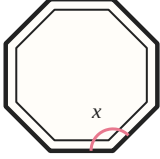
9

Each exterior angle of a regular polygon is 20° . How many sides does the polygon have?

Answer _____

10

A road sign is a regular octagon. Find the size of angle x , one of its interior angles.



Answer _____

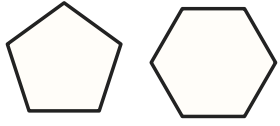
11

Each interior angle of a regular polygon is 156° . How many sides does the polygon have?

Answer _____

12

Which has the bigger interior angle, a regular pentagon or a regular hexagon? By how much?

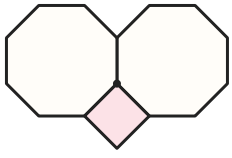


pentagon hexagon

Answer _____

13

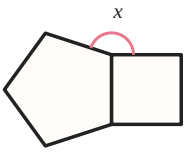
Floor tiles are regular octagons and squares. Two octagons and a square meet at a point. Show that they fit with no gap.



Answer _____

14

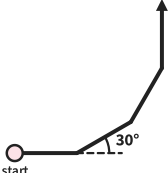
A regular pentagon and a square share a side. Find the size of angle x .



Answer _____

15

A robot moves along a path that is a regular polygon. At each corner it turns through 30° . How many corners does the path have?



Answer _____

16

Kai says that the more sides a regular polygon has, the bigger each exterior angle is. Is Kai right? Explain.

Answer _____