**Interior Angles in Regular Polygons**

Match the number of sides to the name of the polygon.

|  |  |
| --- | --- |
| Octagon | $$5$$ |
| Pentagon | $$6$$ |
| Heptagon | $$7$$ |
| Hexagon | $$8$$ |
| Decagon | $$9$$ |
| Nonagon | $$10$$ |

(a) Find the sum of the interior angles in a regular pentagon.

(b) Find the sum of the interior angles in a regular octagon.

(c) Find the sum of the interior angles in a regular decagon.

(d) Find the sum of the interior angles in a $12$-sided regular polygon.

(a) The sum of the interior angles in a regular hexagon is $720°$. Find the size of one interior angle in a regular hexagon.

(b) Find the size of one interior angle in a regular nonagon.

(c) Find the size of one interior angle in a regular $15$-sided polygon.

(d) Find the size of one interior angle in a regular $20$-sided polygon.

(a) A regular polygon has interior angles which sum to $900°$. How many sides does the polygon have?

(b) A regular polygon has interior angles which sum to $1980°$. How many sides does the polygon have?

(c) A regular polygon has interior angles which sum to $2880°$. How many sides does the polygon have?

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