

114. Interior and Exterior Angles in Polygons

Practice Questions

1. What is the formula for calculating the sum of interior angles of a polygon with n sides?
2. What is the formula for calculating the sum of exterior angles of a polygon?
3. A regular hexagon has 6 sides. Find the size of each interior angle.
4. A regular pentagon has 5 sides. Find the size of each exterior angle.
5. A polygon has 8 sides. Find the sum of its interior angles.
6. A polygon has 12 sides. Find the sum of its exterior angles.
7. A regular octagon has 8 sides. Find the size of each interior angle.
8. A regular nonagon has 9 sides. Find the size of each exterior angle.
9. A polygon has 15 sides. Find the sum of its interior angles.
10. A polygon has 20 sides. Find the sum of its exterior angles.

Scenario Questions

1. A stop sign is a regular octagon. Find the size of each interior angle.
2. A garden is shaped like a regular pentagon. Find the size of each exterior angle.
3. A tile is shaped like a regular hexagon. Find the sum of its interior angles.
4. A playground is designed in the shape of a regular decagon (10 sides). Find the size of each interior angle.
5. A window is shaped like a regular heptagon (7 sides). Find the size of each exterior angle.
6. A clock face is a regular dodecagon (12 sides). Find the sum of its interior angles.
7. A soccer ball has panels shaped like regular pentagons and hexagons. If one panel is a pentagon, find the size of each interior angle.
8. A honeycomb is made up of regular hexagons. Find the sum of the interior angles of one hexagon.
9. A road sign is shaped like a regular nonagon (9 sides). Find the size of each exterior angle.
10. A kite is shaped like a regular quadrilateral (square). Find the sum of its exterior angles.

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Practice Questions

1. Sum of interior angles: $(n - 2) \times 180^\circ$
2. Sum of exterior angles: 360°
3. Each interior angle: 120°
4. Each exterior angle: 72°
5. Sum of interior angles: 1080°
6. Sum of exterior angles: 360°
7. Each interior angle: 135°
8. Each exterior angle: 40°
9. Sum of interior angles: 2340°
10. Sum of exterior angles: 360°

Scenario Questions

1. Each interior angle: 135°
2. Each exterior angle: 72°
3. Sum of interior angles: 720°
4. Each interior angle: 144°
5. Each exterior angle: 51.43°
6. Sum of interior angles: 1800°
7. Each interior angle: 108°
8. Sum of interior angles: 720°
9. Each exterior angle: 40°
10. Sum of exterior angles: 360°