

Chapter 3 Review

Definitions

Transversal

Angle pairs: corresponding, alternate interior, alternate exterior, same-side interior, same-side exterior

Polygon

Regular polygon

Concave

Convex

Types of triangles

By side: scalene, isosceles, equilateral

By angle: acute, equiangular, right, obtuse

Exterior angle

Theorems and Postulates

- Corresponding angles of parallel lines are congruent.
- Alternate interior angles of parallel lines are congruent.
- Alternate exterior angles of parallel lines are congruent.
- Same-side interior angles of parallel lines are supplementary.
- Same-side exterior angles of parallel lines are supplementary.
- If two lines are parallel to the same line, then they are parallel to each other.
- In a plane, if two lines are perpendicular to the same, then they are parallel to each other.
- In a plane, if a line is perpendicular to one parallel line, then it is also perpendicular to the other parallel line.
- The sum of the angles of a triangle is 180° .
- The sum of the angles of a polygon is $(n - 2)180^\circ$.
- An exterior angle of a triangle is equal to the sum of the two remote interior angles.
- Through a point not on the line, there exists exactly one line parallel to the given line.
- The sum of the exterior angles of any polygon is 360° .
- Parallel lines have the same slope.
- The slopes of perpendicular lines are negative reciprocals.

Linear equation forms

Slope-intercept: $y = mx + b$

Point-slope: $y - y_1 = m(x - x_1)$

Horizontal line: $y = \text{number}$

Vertical line: $x = \text{number}$

Standard form: $Ax + By = C$

Constructions

A line parallel to a given line and through a given point.

A line perpendicular to a given line, through a point on the given line.

A line perpendicular to a given line, through a point not on the line.