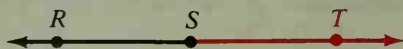


one-to-one mapping (or function): A mapping (or function) from set A to set B in which every member of B has exactly one preimage in A . (p. 571)

opposite rays: Given three collinear points R , S , T : If S is between R and T , then \overrightarrow{SR} and \overrightarrow{ST} are opposite rays. (p. 11)



origin: The intersection point, denoted $O(0, 0)$, of the x -axis and the y -axis in a coordinate plane. (p. 523)

parallel line and plane: A line and a plane that do not intersect. (p. 73)

parallel lines: Coplanar lines that do not intersect. (p. 73)

parallelogram: A quadrilateral with both pairs of opposite sides parallel. (p. 167)

parallel planes: Planes that do not intersect. (p. 73)

pentagon: A 5-sided polygon. (p. 101)

perimeter of a polygon: The sum of the lengths of its sides. (p. 445)

perpendicular bisector of a segment: A line (or ray or segment) that is perpendicular to the segment at its midpoint. (p. 153)

perpendicular line and plane: A line and a plane are perpendicular if and only if they intersect and the line is perpendicular to all lines in the plane that pass through the point of intersection. (p. 128)

perpendicular lines: Two lines that intersect to form right angles. (p. 56)

plane symmetry: A figure in space has plane symmetry if there is a symmetry plane X such that reflection in the plane maps the figure onto itself. (p. 610)

point of tangency: See tangent to a circle.

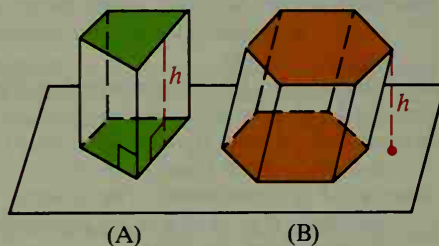
point symmetry: A figure has point symmetry if there is a symmetry point O such that the half-turn H_O maps the figure onto itself. (p. 609)

polygon: A plane figure formed by coplanar segments (*sides*) such that (1) each segment intersects exactly two other segments, one at each endpoint; and (2) no two segments with a common endpoint are collinear. (p. 101)

postulate: A statement that is accepted without proof. (p. 12)

preimage: See mapping.

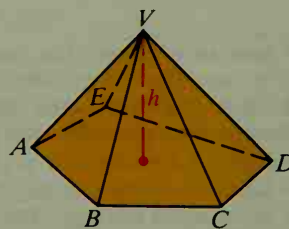
prism: The solids shown are *prisms*. The shaded faces are the *bases* (congruent polygons lying in parallel planes). The other faces are *lateral faces* and all are parallelograms. Adjacent lateral faces intersect in parallel segments called *lateral edges*. An *altitude* of a prism is a segment joining the two base planes and perpendicular to both. The length of an altitude is the *height*, h , of the prism. Figure (A), in which the lateral faces are rectangles, is called a *right prism*. Figure (B) is an *oblique prism*. (p. 475)



product of mappings: See composite of mappings.

proportion: An equation stating that two ratios are equal. The first and last terms are the *extremes*; the middle terms are the *means*. (pp. 242, 245)

pyramid: The diagram shows a pyramid. Point V is its *vertex*; the pentagon $ABCDE$ is its *base*. The five triangular faces meeting at V are *lateral faces*; they intersect in segments called *lateral edges*. The segment from the vertex perpendicular to the base is the *altitude*, and its length is the *height*, h , of the pyramid.



In a *regular pyramid*, the base is a regular polygon, all lateral edges are congruent, all lateral faces are congruent isosceles triangles, and the altitude meets the base at its center. The height of a lateral face is the *slant height* of the pyramid. (p. 482)

Pythagorean triple: Any triple of positive integers a , b , and c , such that $a^2 + b^2 = c^2$. (p. 299)