

**quadrant:** Any one of the four regions into which the plane is divided by the coordinate axes. (p. 523)

**quadrilateral:** A 4-sided polygon. (p. 101)

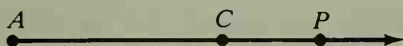
**radius of a circle:** See circle.

**radius of a regular polygon:** The distance from the center to a vertex. (p. 441)

**radius of a right cylinder:** See cylinder.

**ratio:** The ratio of  $x$  to  $y$  ( $y \neq 0$ ) is  $\frac{x}{y}$  and is sometimes written  $x:y$ . (pp. 241, 242)

**ray:** The ray  $\overrightarrow{AC}$  consists of segment  $\overline{AC}$  and all other points  $P$  such that  $C$  is between  $A$  and  $P$ . The point named first, here  $A$ , is the *endpoint* of  $\overrightarrow{AC}$ . (p. 11)



**rectangle:** A quadrilateral with four right angles. (p. 184)

**rectangular solid:** A right rectangular prism. (p. 475) See also prism.

**reflection:** A transformation in which a *line of reflection* acts like a mirror, reflecting points to their images. A reflection in a line  $m$  maps every point  $P$  to a point  $P'$  such that: (1) if  $P$  is not on line  $m$ , then  $m$  is the perpendicular bisector of  $\overline{PP'}$ ; and (2) if  $P$  is on line  $m$ , then  $P' = P$ . (p. 577)

**regular polygon:** A polygon that is both equiangular and equilateral. (p. 103)

**regular pyramid:** See pyramid.

**remote interior angles:** See exterior angle of a triangle.

**rhombus:** A quadrilateral with four congruent sides. (p. 184)

**right angle:** An angle with measure 90. (p. 17)

**right solid:** See cone, cylinder, prism.

**right triangle:** A triangle with one right angle. (p. 93)

**rotation:** A rotation about point  $O$  through  $x^\circ$  is a transformation such that: (1) if point  $P$  is different from  $O$ , then  $OP' = OP$  and  $m\angle POP' = x$ ; and (2) if point  $P$  is the same as  $O$ , then  $P' = P$ . (p. 588)

**rotational symmetry:** A figure has rotational symmetry if there is a rotation that maps the figure onto itself. (p. 609)

**same-side interior angles:** Two interior angles on the same side of a transversal. (p. 74)

**scalar multiple of a vector:** The product of the vector  $(a, b)$  and the real number  $k$  is the scalar multiple  $(ka, kb)$ . (p. 540)

**scale factor:** For similar polygons, the ratio of the lengths of two corresponding sides. (p. 249)

**scalene triangle:** A triangle with no sides congruent. (p. 93)

**secant of a circle:** A line that contains a chord. (p. 329)

**sector of a circle:** A region bounded by two radii and an arc of the circle. (p. 452)

**segment of a line:** Two points on the line and all points between them. The two points are called the *endpoints* of the segment. (p. 11)

**segments divided proportionally:**  $\overline{AB}$  and  $\overline{CD}$  are divided proportionally if points  $L$  and  $M$  lie on  $\overline{AB}$  and  $\overline{CD}$ , respectively, and  $\frac{AL}{LB} = \frac{CM}{MD}$ . (p. 269)

**semicircles:** The two arcs of a circle that are cut off by a diameter. The *measure of a semicircle* is 180. (p. 339)

**sides of an angle:** See angle.

**sides of a triangle:** See triangle.

**similarity mapping:** A transformation that maps any figure to a similar figure. See also dilation. (p. 593)

**similar polygons:** Two polygons are similar if their vertices can be paired so that corresponding angles are congruent and corresponding sides are in proportion. (p. 249)

**similar solids:** Solids that have the same shape but not necessarily the same size. (p. 508)

**simplest form of a radical:** No perfect square factor other than 1 is under the radical sign, no fraction is under the radical sign, and no fraction has a radical in its denominator. (p. 287)

**sine (sin):**

$$\text{sine of } \angle A = \frac{BC}{AB}$$

$$\text{or } \sin A = \frac{\text{opposite}}{\text{hypotenuse}}$$

(p. 312)



**skew lines:** Lines that are not coplanar. (p. 73)

**slant height of a regular pyramid:** See pyramid.

**slant height of a right cone:** See cone.

**slope of a line:** The steepness of a nonvertical

line, defined by  $m = \frac{y_2 - y_1}{x_2 - x_1}$ ,  $x_1 \neq x_2$ ,

where  $P_1(x_1, y_1)$  and  $P_2(x_2, y_2)$  are two points on the line. (p. 529)

**space:** The set of all points. (p. 6)