identity transformation: The mapping that maps every point to itself. (p. 605)

if-then statement: A statement whose basic form is *If p, then q.* Statement *p* is the *hypothesis* and statement *q* is the *conclusion.* (p. 33)

image: *See* mapping.

indirect proof: A proof in which you assume temporarily that the conclusion is not true, and then deduce a contradiction. (p. 214)

inductive reasoning: A kind of reasoning in which the conclusion is based on several past observations. (p. 106)

inscribed angle: An angle whose vertex is on a circle and whose sides contain chords of the circle. (p. 349)

inscribed circle: *See* circumscribed polygon.

inscribed polygon: *See* circumscribed circle.

intersection of two figures: The set of points that are in both figures. (p. 6)

inverse of a conditional: The inverse of the statement *If p, then q* is the statement *If not p, then not q.* (p. 208)

inverse of a transformation: The inverse of *T* is the transformation *S* such that $S \circ T = I$. (p. 606)

isometry: A transformation that maps every segment to a congruent segment. Also called a *congruence mapping.* (p. 572)

isosceles trapezoid: A trapezoid with congruent legs. (p. 190)

isosceles triangle: A triangle with at least two sides congruent. (p. 93)

kite: A quadrilateral that has two pairs of congruent sides, but opposite sides are not congruent. (p. 193)

lateral area of a prism: The sum of the areas of its lateral faces. (p. 476)

lateral edges of a prism: *See* prism.

lateral edges of a pyramid: *See* pyramid.

lateral faces of a prism: *See* prism.

lateral faces of a pyramid: *See* pyramid.

legs of an isosceles triangle: The two congruent sides. The third side is the *base.* (p. 134)

legs of a right triangle: *See* hypotenuse.

legs of a trapezoid: *See* trapezoid.

length of a segment: The distance between its endpoints. (p. 11)

linear equation: An equation whose graph is a line. (p. 548)

line symmetry: A figure has line symmetry if there is a symmetry line *k* such that the reflection R_k maps the figure onto itself. (p. 609)

locus: The set of all points, and only those points, that satisfy one or more conditions. (p. 401)

logically equivalent statements: Statements that are either both true or both false. (p. 208)

magnitude of a vector $\overrightarrow{AB}$**:** The length *AB.* (p. 539)

major arc: *See* minor and major arcs.

mapping: A correspondence between points. Each point *P* in a given set is *mapped* to exactly one point *P′* in the same or a different set. *P′* is called the *image* of *P*, and *P* is called the *preimage* of *P′*. (p. 571)

measure of a major arc: *See* minor and major arcs.

measure of a minor arc: *See* minor and major arcs.

**measure of an angle:** A unique positive number, less than or equal to 180, that is paired with the angle. (p. 17)

measure of a semicircle: *See* semicircles.

median of a trapezoid: The segment that joins the midpoints of the legs. (p. 191)

median of a triangle: A segment from a vertex to the midpoint of the opposite side. (p. 152)

midpoint of a segment: The point that divides the segment into two congruent segments. (p. 13)

minor and major arcs: $\overset{\frown}{YZ}$ is a minor arc of $\odot O$. $\overset{\frown}{YXZ}$ is a major arc. The *measure of a minor arc* is the measure of its central angle, here $\angle YOZ$. The *measure of a major arc* is found by subtracting the measure of the minor arc from 360. (p. 339)
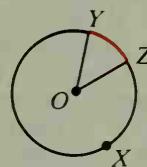
n–gon: A polygon of *n* sides. (p. 101)

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

obtuse angle: An angle with measure between 90 and 180. (p. 17)

obtuse triangle: A triangle with one obtuse angle. (p. 93)

octagon: An 8-sided polygon. (p. 101)