1D unit block: A 1-unit, one-dimensional object, such as a straight line segment, saved as a block. (Ch. 24)

2D unit block: A 2D object that fits into a 1-unit × 1-unit square, saved as a block. (Ch. 24)

3D unit block: A 3D object that fits into a 1-unit × 1-unit × 1-unit cube, saved as a block. (Ch. 24)

Alignment parameter: A parameter that aligns a block with another object in the drawing. (Ch. 26)

Alignment paths: Temporary lines and arcs that coincide with the position of existing objects. (Ch. 7)

Alternate units: Dimensions in which measurements in one system, such as inches, are followed by bracketed measurements in another system, such as millimeters. Also called dual dimensioning units. (Ch. 17)

Angular dimensioning: A method of dimensioning angles in which one corner of an angle is located with a dimension and the value of the angle is provided in degrees. (Ch. 18)

Annotation: Textual information presented in notes, specifications, comments, and symbols. (Ch. 9, 19) Letters, numbers, words, and notes used to describe information on a drawing. (Ch. 30)

Annotational format: A dimensional constraint format in which the constraints look like traditional dimensions, using a dimension style. Annotational dimensional constraints can still control the size or location of geometry. (Ch. 22)

Annotation scale: The drawing scale AutoCAD uses to calculate the height of annotative text. (Ch. 9) The scale AutoCAD uses to calculate the scale factor applied to annotative objects. (Ch. 30)

Annotative object representation: Display of an annotative object at an annotation scale that the object supports. (Ch. 30)

Annotative objects: AutoCAD objects that can adapt automatically to the current drawing scale. (Ch. 30)

Annotative text: Text scaled by AutoCAD according to the specified annotation scale. (Ch. 9)
arc: Any portion of a circle; usually dimensioned according to the radius. (Ch. 4)
archiving: Gathering and storing all drawings and associated files related to a project. (Ch. 32)
array: Multiple copies of an object arranged in a pattern. (Ch. 13)
array action: An action used to array objects within the block based on preset specifications. (Ch. 26)
associated list: The ASME term describing tables added or related to engineering drawings. (Ch. 11)
associative hatch pattern: A hatch pattern that updates automatically when you edit associated objects. (Ch. 23)
associative dimension: A dimension in which all elements are linked to, or associated with, the dimensioned object. The dimension updates automatically when the associated object changes. (Ch. 17, 21)
attachment: An xref linked with or referenced into the current drawing. (Ch. 31)
attributes: Text-based data assigned to a specific object. Attributes turn a drawing into a graphical database. (Ch. 25)
auto-fill: A table function that fills selected cells based on the contents of another cell. (Ch. 11)
automatic save: A save procedure that occurs at specified intervals without your input. (Ch. 2)
automatic windowing: Selection method that allows you to select multiple objects at one time without entering a selection option. Also known as implied windowing. (Ch. 3)
auxiliary view: View used to show the true size and shape of a foreshortened surface. (Ch. 8)

B
background: The first multiline you select to create a closed cross intersection. (Supplement 4B)
background mask: A mask that hides a portion of objects behind and around text so that the text is unobstructed. (Ch. 9)
balloons: Circles that contain a number or letter to identify the assembly component and correlate the component to a parts list or bill of materials. Balloons connect to a component with a leader line. (Ch. 21)
base dimension: The dimension line that remains in the same location, with which other dimension lines align or spaced. (Ch. 21)
baseline dimensioning: A method of dimensioning in which several dimensions originate from a common surface, centerline, or center plane. (Ch. 18)
base point: The initial reference point AutoCAD uses when stretching, moving, copying, and scaling objects. (Ch. 12)
base point parameter: A parameter that defines an alternate base point for a block. (Ch. 26)
basic dimension: A theoretically perfect dimension used to describe the exact size, profile, orientation, and location of a feature. (Ch. 17, 20)
big font: A supplement that provides Asian and other large-format fonts that have characters and symbols not present in other font files. (Ch. 9)
bilateral tolerance: A tolerance style that permits variance in both the positive and negative directions from the specified dimension. (Ch. 20)
binding: Convert an xref to a permanently inserted block in the host drawing. (Ch. 31)
**block:** A symbol or shape saved and stored in a drawing for repeated use. (Ch. 8, 19, 24)

**block definition:** Information about a block stored within the drawing file. (Ch. 24)

**block insertion tools:** Blocks located on a tool palette. (Ch. 24)

**block properties table:** A table of action parameters and/or constraint parameters that allows you to create multiple block properties and then select them to create block references. (Ch. 27)

**block reference:** A specific instance of a block inserted into a drawing. (Ch. 24)

**boundary:** The area filled by a hatch. (Ch. 23)

**boundary edge:** The edge to which objects such as lines, arcs, and polylines extend. (Ch. 12)

**boundary set:** The part of the drawing AutoCAD evaluates to define a boundary. (Ch. 15)

**break:** Removal of a portion of a long, constant-shaped object to make the object fit better on the sheet. Also called a *conventional break*. (Ch. 18)

**broken-out sections:** Sections that show a small portion of the object removed. (Ch. 23)

**BSI:** The British Standards Institution. (Ch. 1)

**button:** A “hot spot” on the screen that you pick to access an application, tool, or option. (Ch. 1)

**Cartesian coordinate system:** A system that locates points in space according to distances from three intersecting axes. Also called *rectangular coordinate system*. (Ch. 3)

**cascading menu:** A menu of options related to the chosen menu item. (Ch. 1)

**cell styles:** Styles that allow you to assign specific formatting to data, header, and title row cells. (Ch. 11)

**chain action:** An action that triggers another action when you modify a parameter. (Ch. 26)

**chain dimensioning:** A method of dimensioning in which dimensions appear in a line from one feature to the next. (Ch. 18)

**chamfer:** In mechanical drafting, a small angled surface used to relieve a sharp corner. (Ch. 4, 12, 19)

**chart dimensioning:** A type of dimensioning in which the variable dimensions are shown with letters that correlate to a chart in which the possible dimensions are given. (Ch. 19)

**check box:** A selectable box that turns an item on (when checked) or off (when unchecked). (Ch. 1)

**child:** A style override. (Ch. 17)

**circle:** A closed curve with a constant radius around a center point; usually dimensioned according to the diameter. (Ch. 4)

**circular array:** A circular pattern of objects. Also called a *polar array*. (Ch. 13)

**circular reference error:** An error that occurs when a block definition references itself. (Ch. 24)

**chord length:** The linear distance between two points on a circle or arc. (Ch. 24)

**circumscribed polygon:** A polygon drawn outside an imaginary circle so that the sides of the polygon are tangent to the circle. (Ch. 4)

**click:** Press the left mouse button to select. Also called *pick*. (Ch. 1)
coincident: A geometric construction that specifies two points sharing the same position. (Ch. 22)
color-dependent plot style table: A file that contains plot style settings used to assign plot values to object colors. (Ch. 28)
command: An instruction issued to the computer to complete a specific task. For example, use the LINE tool to draw lines. Also called a tool. (Ch. 1)
command aliases: Abbreviated command names entered at the keyboard. (Ch. 1)
command line: Area where you can type commands (tool names) and options. (Ch. 1)
Commercial and Government Entity Code (CAGE Code): A five-digit numerical code identifier applicable to any organization that produces items used by the federal government. (Ch. 25)
composition: The spacing, layout, and appearance of text. (Ch. 9)
computer-aided design and drafting (CADD): The process of using a computer with CADD software to design and produce drawings and models. (Ch. 1)
concentric: Arcs, circles, and/or ellipses sharing the same center point. (Ch. 22)
configured: Installed and ready to use. (Ch. 28)
constant: An expression or value that stays the same. (Ch. 16)
constraint bars: Toolbars that allow you to view and remove geometric constraints. (Ch. 22)
constraint parameters: Dimensional constraints that control the size or location of block geometry numerically. (Ch. 26, 27)
constraints: Geometric characteristics and dimensions that control the size, shape, and position of drawing geometry. Also called parameters. (Ch. 22)
construction lines: Lines commonly used to lay out a drawing. (Ch. 8)
context-oriented help: Help information for the active tool. (Ch. 1)
context-sensitive: Specific to the active tool or option. (Ch. 1)
continued dimensioning: The AutoCAD term for chain dimensioning. (Ch. 18)
control code sequence: A key sequence beginning with %% that defines symbols in text created with the TEXT tool. (Ch. 10)
conventional break: Removal of a portion of a long, constant-shaped object to make the object fit better on the sheet. Also called a break. (Ch. 18)
conventional dimensioning: Dimensioning without the use of geometric tolerancing. (Ch. 20)
coordinate dimensioning: A method of dimensioning angles in which dimensions locate the corner of the angle. (Ch. 18)
coordinates: Numerical values used to locate a point in the drawing area. (Ch. 1)
copy and paste: A Windows function that allows you to copy an object from one location and paste it into another. (Ch. 14)
counterbore: A larger-diameter hole machined at one end of a smaller hole that provides a place for the screw head. (Ch. 19)
countersink: A cone-shaped recess at one end of a hole that provides a mating surface for a screw head of the same shape. (Ch. 19)
cubic curve: A very smooth curve created by the PEDIT Spline option with SPLINETYPE set at 6. (Ch. 15)
current layer: The active layer. Whatever you draw is placed on the current layer. (Ch. 5)
cursor menu: Context-sensitive menu available by right-clicking on interface items or objects. Menu content varies based on the location of the cursor and the current conditions, such as whether a tool is active or whether an object is selected. Also called shortcut menu, right-click menu, or pop-up menu. (Ch. 1)

curve fitting: Converting a polyline into a series of smooth curves. (Ch. 15)

cutting: The process of deleting a portion of a multiline element or an entire multiline. (Supplement 4B)

cutting edge: An object such as a line, arc, or text that defines the point (edge) at which the object you trim will be cut. (Ch. 12)

cutting-plane line: The line that cuts through the object to expose internal features. (Ch. 23)

cycle: Repeatedly select a series of stacked objects until the desired object highlights. (Ch. 3)

default: A value maintained by the computer until changed. (Ch. 1)

deferred perpendicular: A calculation of the perpendicular point that is delayed until you pick another point. (Ch. 7)

deferred tangency: A calculation of the point of tangency that is delayed until you pick both points. (Ch. 7)

definition points: The points used to specify the dimension location and the center point of the dimension text. Also called defpoints. (Ch. 21) The points you pick or coordinates you enter to specify multilines. (Supplement 4B)

defpoints: The points used to specify the dimension location and the center point of the dimension text. Also called definition points. (Ch. 21)

demand loading: Loading only the portion of an xref file necessary to regenerate the host drawing. (Ch. 31)

dependent objects: Objects displayed in the host drawing, but defined in the xref drawing. (Ch. 31)

dependent symbols: Named objects in a drawing that have been inserted or referenced into another drawing. (Ch. 24)

destination object: When matching properties, the object that receives the properties of the source object. (Ch. 14)

destination points: Points to define the new location of objects during an ALIGN operation. (Ch. 13)

detach: Remove an xref from a host drawing. (Ch. 31)

deviation tolerance: The AutoCAD term for an unequal bilateral tolerance. (Ch. 20)

dialog box: A window-like item that contains various settings and information. (Ch. 1)

dimension: A description of the size, shape, or location of features on an object or structure. (Ch. 17)

dimensional constraint parameters: Parameters that form when you insert a dimensional constraint. (Ch. 22)

dimensional constraints: Measurements that numerically control the size or location of geometry. (Ch. 22)

dimensional input: An instinctive dynamic input point entry technique, similar to polar coordinate entry. (Ch. 3)

dimension style: A saved configuration of dimension appearance settings. (Ch. 17)
**dimension style override:** A temporary alteration of dimension style settings that does not actually modify the style. (Ch. 21)

**dimension variables:** System variables that store the values of dimension style settings. (Ch. 17)

**DIN:** Deutsches Institut Für Normung, established by the German Institute for Standardization. (Ch. 1)

**direct dimensioning:** A type of dimensioning applied to control the specific size or location of one or more specific features. (Ch. 18)

**direct distance entry:** Entering points by dragging the crosshairs for direction and typing a number for distance. (Ch. 3)

**displacement:** The direction and distance in which an object moves. (Ch. 12)

**dithering:** A plotter setting in which lines appear as dotted linetypes in which dots are spaced closer to or farther from each other to create the illusion of shading. (Supplement 28B)

**dock:** Describes interface items locked into position on an edge of the AutoCAD window (top, bottom, left, or right). (Ch. 1)

**double-click:** Quickly press the left mouse button twice to select. (Ch. 1)

**drawing content:** All of the objects, settings, and other components that make up a drawing. (Ch. 5)

**drawing exchange file (DXF):** A common file format recognized by other CADD systems. (Ch. 2)

**drawing files:** Files you use to create and store drawings. (Ch. 2)

**drawing scale:** The ratio between the actual size of objects in the drawing and the size at which the objects plot on a sheet of paper. (Ch. 28)

**drawing sessions:** Time spent working on a drawing project, including analyzing design parameters and using AutoCAD. (Ch. 1)

**drawing standards file (DWS):** A file used to check the standards of another file using AutoCAD standards-checking tools. (Ch. 2)

**drawing template:** A file that contains standard drawing settings and objects for use in new drawings. Also called a *template*. (Ch. 1, 2)

**drawing window:** The largest area in the AutoCAD window, where drawing and modeling occurs. Also called a *graphics window*. (Ch. 1)

**drop-down list:** A list of options that appears when you pick a button that contains a down arrow. (Ch. 1)

**drawing units:** The standard linear and angular units and precision of measurement. (Ch. 2)

**dual dimensioning units:** Dimensions in which measurements in one system, such as inches, are followed by bracketed measurements in another system, such as millimeters. Also called *alternate units*. (Ch. 17)

**DWS:** Drawing standards file; a file used to check the standards of another file using AutoCAD standards-checking tools. (Ch. 2)

**DXF:** Drawing exchange file; a common file format recognized by other CADD systems. (Ch. 2)

**dynamic block:** An adjustable block that you can assign parameters, actions, and/or geometric constraints and constraint parameters. (Ch. 26)

**dynamic columns:** Columns calculated automatically by AutoCAD according to the amount of text and the specified height and width of the columns. (Ch. 9)
**dynamic format**: A dimensional constraint format specifically for controlling the size or location of geometry. (Ch. 22)

**dynamic input**: Area near the crosshairs where you can type commands and options and view context-oriented information. (Ch. 1)

**E**

**editing**: A procedure used to modify an existing object. (Ch. 3)

**elements**: The individual lines that make up a multiline. (Supplement 4B)

**ellipse**: An oval shape that contains two centers of equal radius. (Ch. 4)

**escape key**: Keyboard key used to cancel a tool or exit a dialog box. (Ch. 1)

**example sheet set**: An existing sheet set used as a template for developing a new sheet set. (Ch. 32)

**exporting**: Transferring electronic data from a database, such as a drawing file, to a different format used by another program. (Ch. 28)

**extension path**: A dashed line or arc that extends from an acquired point to the current location of the crosshairs. (Ch. 7)

**external reference**: A DWG, DWF, DWFx, raster image, DNG, or PDF file incorporated into a drawing for reference only. Also called an *xref*. (Ch. 31)

**extract**: Gather content from the drawing file database to display in the drawing or in an external document. (Ch. 25) In external referencing: Temporarily remove from the drawing for editing purposes. (Ch. 31)

**F**

**feature**: Any physical portion of a part or object, such as a surface, hole, window, or door. (Ch. 17)

**field**: A text object that can display a specific property value, setting, or characteristic. (Ch. 10, 16, 32)

**file properties**: Values used to define a variety of file and design characteristics. (Ch. 2)

**fillet**: A rounded interior corner used to relieve stress or ease the contour of inside corners. (Ch. 4, 12, 19)

**fit curve**: A curve that passes through all of its fit points. (Ch. 15)

**fit format**: The arrangement of dimension text and arrowheads on a drawing. (Ch. 17)

**fit points**: Points through which the spline passes that determine the shape of the spline. (Ch. 15)

**flash drive**: A portable or removable storage device. (Supplement 2A)

**flip action**: An action used to flip the entire block. (Ch. 26)

**flip parameter**: A parameter that mirrors selected objects within a block. (Ch. 26)

**float**: Describes interface items that appear within a border and can be resized or moved. (Ch. 1)

**floating viewport**: A viewport added to a layout in paper space to display objects drawn in model space. (Ch. 28)

**flyout**: Set of related buttons that appear when you pick the arrow next to certain tool buttons. (Ch. 1)

**font**: The face design of a letter or number. (Ch. 9)

**foreground**: The second multiline you select to create a closed cross intersection. (Supplement 4B)

**foreshortened**: A surface at an angle to the line of sight. Foreshortened surfaces appear shorter than their true size and shape. (Ch. 8)

**formatting**: The process for thoroughly cleaning a removable disk. (Supplement 2A)
formulas: Mathematical expressions that allow you to perform calculations within table cells. (Ch. 11)

full sections: Sections that show half the object removed. (Ch. 23)

fully constrained: Describes a drawing in which objects have no freedom of movement. (Ch. 22)

function: An expression or value that asks for user input to get values to pass to the expression. (Ch. 16)

function keys: The keys labeled [F1] through [F12] along the top of the keyboard. (Ch. 1)

global linetype scale: A linetype scale applied to every linetype in the current drawing. (Ch. 5)

GOST: Gosudarstvennyy standart, maintained by the Euro-Asian Council for Standardization. (Ch. 1)

grab bars: Two thin bars at the top or left edge of a docked or floating feature; used to move the feature. (Ch. 1)

gradient fill: A shading transition between the tones of one color or two separate colors. (Ch. 23)

graphical user interface (GUI): On-screen features that allow you to interact with a software program. (Ch. 1)

graphic pattern: A patterned arrangement of objects or symbols. (Ch. 20)

graphics window: The largest area in the AutoCAD window, where drawing and modeling occurs. Also called a drawing window. (Ch. 1)

grid: A pattern of lines that appears on-screen for reference; analogous to graph paper. (Ch. 3)

grips: Small boxes that appear at strategic points on a selected object, allowing you to edit the object directly. (Ch. 3, 11, 14)

grouped balloons: Balloons that share the same leader, which typically connects to the most obviously displayed component. (Ch. 21)

group filter: A filter created by adding layers to the filter definition. (Supplement 5B)

gutter: The space between columns of text. (Ch. 9)

half sections: Sections that show one-quarter of the object removed. (Ch. 23)

hard copy: A physical drawing produced by a printer or plotter. (Ch. 6)
hatches: AutoCAD section line symbols and graphic patterns. Also called *hatch patterns*. (Ch. 23)
hatch patterns: AutoCAD section line symbols and graphic patterns. Also called *hatches*. (Ch. 23)
hexagon: Six-sided regular polygon. (Ch. 4)
host drawing: The drawing into which xrefs are incorporated. (Ch. 31)
hover: Pause the cursor over an item to display information or options. (Ch. 1)
hyperlinks: Links in a document that connect it to related information in other documents or on the Internet. (Ch. 32)
icon: Small graphic representing an application, file, or tool. (Ch. 1)
implied intersection: The point at which objects would meet if they were extended. (Ch. 12)
implied windowing: Selection method that allows you to select multiple objects at one time without entering a selection option. Also known as *automatic windowing*. (Ch. 3)
included angle: The angle formed between the center, start point, and endpoint of an arc. (Ch. 4)
imfer: Automatically detect and apply using logic. (Ch. 22)
inscribed polygon: A polygon drawn inside an imaginary circle so that its corners touch the circle. (Ch. 4)
insertion base point: The point on a block that defines where the block is positioned during insertion. (Ch. 24)
interface: Items that allow you to input data to and receive outputs from a computer system. (Ch. 1)

island: A closed area inside a boundary. (Ch. 15) Boundaries inside another boundary. (Ch. 23)
isometric drawing: A view in which all three axes appear at equal 120° angles with the plane of projection. (Supplement 3B)
isometric lines: Lines that are parallel to an axis in an isometric drawing. (Supplement 3B)
isoplane: One of the three isometric planes: left, right, or top. (Supplement 3B)

J
JIS: Japanese Industry Standard. (Ch. 1)
joints: Lines connecting the vertices of adjacent multiline elements at the end of each segment. Also called *miters*. (Supplement 4B)
justification point: The point from which text is justified according to the current justification option. (Ch. 10)
justify: Align the margins or edges of text. For example, left-justified text aligns along an imaginary left border. (Ch. 9)

K
keyboard shortcut: Single key or key combination used to issue a command or select an option. Also called *shortcut key*. (Ch. 1)

L
landing: The AutoCAD term for a leader shoulder. (Ch. 19)
landscape: A horizontal paper orientation. (Ch. 6)
layer filters: Settings that screen out, or filter, layers you do not want to display in the list view pane of the *Layer Properties Manager*. (Ch. 5)
layer index: A list of objects ordered according to the layers to which they are assigned. (Ch. 31)
**layer property overrides:** Color, linetype, lineweight, transparency, and plot style properties applied to specific viewports in paper space. (Ch. 29)

**layers:** Components of the AutoCAD overlay system that allow you to separate objects into logical groups for formatting and display purposes. (Ch. 5)

**layer state:** A saved setting, or state, of layer properties for all layers in the drawing. (Ch. 5)

**layout:** An arrangement in paper space of sheet elements, typically including a border, title block, general notes, and a display of items drawn in model space. (Ch. 2, 28)

**layout space:** The environment in AutoCAD in which you create layouts for plotting and display purposes. Also called paper space. (Ch. 2)

**leader line:** A line that connects a note or symbol to a specific feature or location on a drawing. (Ch. 19)

**library path:** The path AutoCAD searches by default to find an xref file, including the current folder and locations set in the Options dialog box. (Ch. 31)

**limit dimensioning:** Method in which the upper and lower limits are given, instead of the specified dimension and tolerance. (Ch. 20)

**limits:** The size of the virtual drawing area in model space. (Ch. 2) In dimensioning, the largest and smallest numerical values the feature can have. (Ch. 20)

**linear parameter:** A parameter that creates a measurement reference between two points. (Ch. 26)

**line conventions:** Standards related to line thickness, type, and purpose. (Ch. 5)

**line spacing:** The vertical distance from the bottom of one line of text to the bottom of the next line. (Ch. 9)

**linetype scale:** The lengths of dashes and spaces in linetypes. (Ch. 5)

**lineweight:** The assigned width of lines for display and plotting. (Ch. 5)

**list box:** A boxed area that contains a list of items or options from which to select. (Ch. 1)

**location dimensions:** Dimensions that locate features on an object without specifying the size of the feature. (Ch. 17)

**lookup action:** An action used to select a preset group of parameter values to carry out actions with stored values. (Ch. 27)

**lookup parameter:** A parameter that allows tabular properties to be used with existing parameter values. (Ch. 27)

**lookup table:** A table that groups the properties of parameters into custom-named lookup records. (Ch. 27)

**M**

**major axis:** The longer of the two axes in an ellipse. (Ch. 4)

**margin:** The extent of the printable area; objects drawn past the margin (dashed lines) do not print. (Ch. 28)

**markers:** Visual cues to confirm object snap points. (Ch. 3) Visual cues that appear at the snap point to confirm object snap mode and location. (Ch. 7)

**marking up:** The process of reviewing a drawing and marking required changes. Also called redlining. (Ch. 19)

**master drawing:** A host drawing created by attaching several frequently used xrefs. (Ch. 31)

**minor axis:** The shorter of the two axes in an ellipse. (Ch. 4)

**mirror line:** The line of symmetry across which objects are mirrored. (Ch. 13)
miters: Lines connecting the vertices of adjacent multiline elements at the end of each segment. Also called joints. (Supplement 4B)

model: A term that usually describes a 3D model, but in AutoCAD also refers to 2D drawing geometry, typically created at full size. (Ch. 2) A 2D or 3D drawing composed of various objects, such as lines, circles, and text, usually created at full size. (Ch. 28)

modeless dialog box: Special type of window containing tool buttons and features common to dialog boxes. Palettes can remain open while other tools are active. Also called a palette. (Ch. 1)

model space: The environment in AutoCAD in which the majority of drawing usually occurs, including the design and drafting of drawing views. (Ch. 2) The environment in AutoCAD in which you create drawings and designs. (Ch. 28)

model view: A drawing file or named model space view added to a layout to create a sheet view. (Ch. 32)

move action: An action used to move a block object independently of other objects in the same block. (Ch. 26)

multiline styles: Saved configurations for the appearance of leaders. (Ch. 19)

multiline: A single object consisting of up to 16 parallel line elements. (Supplement 4B)

multiview drawing: Presentation of drawing views created through orthographic projection. (Ch. 8)

named objects: Blocks, dimension styles, layers, linetypes, materials, multileader styles, plot styles, shapes, table styles, text styles, and visual styles that have specific names. (Ch. 24)

named plot style table: A file that contains plot style settings used to assign plot values to objects or layers. (Ch. 28)

named view: A specific drawing display saved for easy recall and future use, analogous to taking a picture. (Ch. 6)

nested xrefs: Xrefs contained within other xrefs. (Ch. 31)

nesting: Creating a block that includes other blocks. (Ch. 24)

non-associative dimension: A dimension linked to point locations, not an object; does not update when the object changes. (Ch. 21)

non-associative hatch pattern: A hatch that is independent of objects and updates when the boundary changes, but not when you make changes to objects. (Ch. 23)

non-breaking space: A symbol that you insert in place of a space to keep separate words together on one line, instead of wrapping the words that occur past the text boundary to the next line. (Ch. 9)

nonisometric lines: Lines that are not parallel to the axes in an isometric drawing. (Supplement 3B)

non-uniform rational B-spline (NURBS) curve (spline): A true (mathematically correct) spline. (Ch. 4)

noun/verb selection: Performing tasks in AutoCAD by selecting the objects before activating a tool. (Ch. 14)

NURBS curve: A non-uniform rational B-spline that is commonly used to construct freeform 3D surfaces. (Supplement 4C)

N

object snap: A tool that snaps to exact points, such as endpoints or midpoints, on or in relation to existing objects. (Ch. 3, 7)
**object snap override:** A method of isolating a specific object snap mode while using a tool. The selected object snap temporarily overrides the running object snap modes. (Ch. 7)

**object snap tracking:** A tool that provides horizontal and vertical alignment paths for locating points after a point is acquired with object snap. (Ch. 3, 7)

**offset sections:** Sections that have a staggered cutting plane. (Ch. 23)

**option:** A choice associated with a tool, or an alternative function of a tool. (Ch. 1)

**order:** In a spline, the degree of the spline polynomial + 1. (Ch. 15)

**ordinate dimensioning:** The AutoCAD term for rectangular coordinate dimensioning without dimension lines. (Ch. 19)

**origin:** The intersection point of the X, Y, and Z axes. The position of the default 2D origin is 0,0, where X = 0 and Y = 0. (Ch. 3)

**ortho:** From *orthogonal*, which means “at right angles.” (Ch. 3)

**orthographic projection:** Projecting object features onto an imaginary plane. (Ch. 8)

**over-constrained:** Describes a drawing that contains too many constraints. (Ch. 22)

**overlay:** An xref displayed in the host drawing, but not attached to it. (Ch. 31)

**overlay system:** A system of separating drawing components by layer. (Ch. 5)

**override:** A temporary change to the current style settings; the process of changing a current style temporarily. (Ch. 17)

**palette:** Special type of window containing tool buttons and features common to dialog boxes. Palettes can remain open while other tools are active. Also called a *modeless dialog box*. (Ch. 1)

**pan:** Change the drawing display so that different portions of the drawing are visible on-screen. (Ch. 3, 6)

**panels:** Palette divisions that group tools. Also called *ribbon panels*. (Ch. 1)

**paper space:** The environment in AutoCAD in which you create layouts for plotting and display purposes. Also called *layout space*. (Ch. 2, 28)

**paper text height:** The plotted text height. (Ch. 9)

**paragraph alignment:** The alignment of multiline text inside the text boundary. (Ch. 9)

**parallel:** A geometric construction that specifies that objects such as lines will never intersect, no matter how long they become. (Ch. 22)

**parallel alignment path:** A dashed line parallel to an existing line that extends from the location of the crosshairs. (Ch. 7)

**parameter filters:** Settings that screen out, or filter, parameters you do not want to display in the list view pane of the *Parameters Manager*. (Ch. 22)

**parameter grips:** Special grips that allow you to change the parameters of a dynamic block. (Ch. 26)

**parameter label:** A label that indicates the purpose of a parameter. (Ch. 26)
**parameters:** Geometric characteristics and dimensions that control the size, shape, and position of drawing geometry. Also called *constraints.* (Ch. 22) In the context of dynamic blocks, specifications for block construction that control block characteristics such as positions, distances, and angles of dynamic block geometry. Also called *action parameters.* (Ch. 26)

**parametric drafting:** A form of drafting in which parameters and constraints drive object size and location to produce drawings with features that adapt to changes made to other features. (Ch. 22)

**parent:** The dimension style from which a style override is formed. (Ch. 17)

**parent xref:** An xref that contains one or more other xrefs. (Ch. 31)

**partial auxiliary view:** An auxiliary view that shows a specific inclined surface of an object, rather than the entire object. (Ch. 8)

**partial open:** Describes opening a portion of a file by specifying only the views and layers you need to see. (Ch. 2)

**perpendicular:** A geometric construction that defines a $90^\circ$ angle between objects such as lines. (Ch. 22)

**pick:** Press the left mouse button to select. Also called *click.* (Ch. 1)

**pick box:** Small box that replaces the crosshairs when the *Select Objects:* prompt is active. (Ch. 3)

**pictorial drawing:** A drawing that shows the height, width, and depth of an object in a single view. (Supplement 3B)

**plot device:** The printer, plotter, or alternative plotting system to which the drawing is sent. (Ch. 28)

**plot spooler:** A file that manages plotting in the background while you work. (Supplement 28A) A disk drive with memory that allows you to plot files. (Ch. 29)

**plot stamp:** Text added only to the hard copy that includes information such as the drawing name or the date and time the drawing was printed. (Ch. 29)

**plot style table:** A configuration, saved as a separate file, that groups plot styles and provides complete control over plot style settings. (Ch. 28)

**plot styles:** Properties, including color, linetype, linewidth, line end treatment, and fill style, that are applied to objects for plotting purposes only. (Ch. 28)

**plus-minus dimensioning:** A tolerance style in which the positive and negative variance is equal and is preceded by a ± symbol. (Ch. 20)

**point entry:** Locating a point, such as the endpoint of a line, on the AutoCAD coordinate system. (Ch. 3)

**pointer input:** The process of entering points using dynamic input. (Ch. 3)

**point of tangency:** The point shared by tangent objects. (Ch. 4)

**point parameter:** A parameter that defines an XY coordinate location in the drawing. (Ch. 26)

**polar array:** A circular pattern of objects. Also called a *circular array.* (Ch. 13)

**polar coordinates:** Coordinates based on the distance from a fixed point at a given angle. (Ch. 3)

**polar coordinate system:** A coordinate system in which angular dimensions locate features from surfaces, centerlines, or center planes. (Ch. 17)

**polar parameter:** A parameter that includes a distance property and an angle property. (Ch. 26)
polar stretch action: An action used to change the size, shape, and rotation of block objects with a stretch operation. (Ch. 26)

polar tracking: A drawing aid that causes the drawing crosshairs to “snap” to preset incremental angles when locating a point relative to another point. (Ch. 3, 7)

polygon: Closed plane figure with at least three sides, such as a triangle or rectangle. (Ch. 3)

polyline: A series of lines and arcs that constitute a single object. (Ch. 4)

polyline vertex: The point at which two polyline segments meet. (Ch. 15)

pop-up menu: Context-sensitive menu available by right-clicking on interface items or objects. Menu content varies based on the location of the cursor and the current conditions, such as whether a tool is active or whether an object is selected. Also called shortcut menu, cursor menu, or right-click menu. (Ch. 1)

portrait: A vertical paper orientation. (Ch. 6)

prefixes: Special notes or applications placed before the dimension value. (Ch. 17)

preview box: An area in a dialog box that shows the results of the options and settings you select. (Ch. 1)

projection plane: An imaginary projection plane parallel to the object. (Ch. 8)

property filter: A filter that screens layers according to a specific layer property. (Supplement 5B)

publishing: Preparing a sequential set of multiple drawings for hard copy or electronic plotting of the set. (Ch. 29, 32)

purge: Delete unused named objects from a drawing file. (Ch. 24)

Q

quadrant: A point on the circumference at the horizontal or vertical quarter of a circle, arc, donut, or ellipse. (Ch. 7)

quadratic curve: A curve created by the PEDIT Spline option with SPLINETYPE set at 5. The curve is tangent to the polyline segments between the intermediate control points. (Ch. 15)

R

radio button: A selection that activates a single item in a group of options. (Ch. 1)

ray: A linear AutoCAD object that is infinite in one direction only; considered semi-infinite. (Ch. 8)

read-only: Describes a drawing file intended for viewing only. To keep any changes made to the drawing, use the SAVEAS tool to save the file using a different name. (Ch. 2, 32)

real block: A block originally drawn at a 1:1 scale and then inserted using 1 for both the X and Y scale factors. (Ch. 24)

realtime panning: A panning operation in which you can see the drawing move on-screen as you pan. (Ch. 6)

realtime zoom: A zoom that you view as it occurs. (Ch. 6)

rectangular array: A pattern made up of columns and rows of objects. (Ch. 13)

rectangular coordinate dimensioning without dimension lines: A type of dimensioning that includes only extension lines and text aligned with the extension lines. (Ch. 19)

rectangular coordinates: A set of numerical values that identify the location of a point on the X, Y, and Z axes of the Cartesian coordinate system. (Ch. 3)
rectangular coordinate system: A system that locates points in space according to distances from three intersecting axes. Also called Cartesian coordinate system. (Ch. 3) A system for locating dimensions from surfaces, centerlines, or center planes using linear dimensions. (Ch. 17)

redlining: The process of reviewing a drawing and marking required changes. Also called marking up. (Ch. 19)

redrawing: A process that was once useful for refreshing the screen display without regenerating the drawing. (Ch. 6)

reference dimension: A dimension used for reference purposes only. Parentheses enclose reference dimensions to differentiate them from other dimensions. (Ch. 22)

reference editing: Editing reference drawings from within the host file. (Ch. 31)

reference file: An xref; a file referenced by the host. (Ch. 31)

region: A closed 2D area that can have physical properties such as centroids and products of inertia. (Ch. 15, 23)

regenerating: Recalculating and redisplaying all objects on-screen to correspond to the information in the file database. (Ch. 6)

regular polygon: A closed geometric figure with three or more equal sides and equal angles. (Ch. 4)

relative coordinates: Coordinates specified from, or relative to, the previous position, rather than from the origin. (Ch. 3)

relative operators: In math, functions that determine the relationship between data items. (Ch. 14)

relative path: A path to a file defined according to the location of the file relative to the host drawing. (Ch. 31)

reload: Update an xref in the host drawing. (Ch. 31)

removed sections: Standard section views, but removed from direct projection from the cutting plane. (Ch. 23)

removed view: A view removed from alignment with other views when drawing space is unavailable. (Ch. 8)

repetitive features: Many features having the same shape and size. (Ch. 19)

resource drawings: Drawing files that include named model space views referenced for use as sheet views. (Ch. 32)

revision block: A block that provides space for the revision letter, a description of the change, the date, and approvals. (Ch. 25)

revision cloud: A polyline of sequential arcs used to form a cloud shape around changes in a drawing. (Ch. 19)

revolved sections: Sections that clarify the contour of objects that have the same shape throughout their length. (Ch. 23)

ribbon panels: Palette divisions that group tools. Also called panels. (Ch. 1)

right-click: Use the right mouse button to select. (Ch. 1)

right-click menu: Context-sensitive menu available by right-clicking on interface items or objects. Menu content varies based on the location of the cursor and the current conditions, such as whether a tool is active or whether an object is selected. Also called shortcut menu, cursor menu, or pop-up menu. (Ch. 1)

root point: The first point specified to create a construction line or ray. (Ch. 8)

rotate action: An action used to rotate objects within a block without affecting the other objects in the block. (Ch. 26)

rotation parameter: A parameter that allows objects in a block to rotate independently of the block. (Ch. 26)
round: A rounded exterior corner used to remove sharp edges or ease the contour of exterior corners. (Ch. 4, 12, 19)

rubberband line: A reference line that extends from the crosshairs with certain drawing tools after you make the first selection. (Ch. 3)

running object snaps: Automatic object snap modes that run in the background while you work. (Ch. 3, 7)

S

scalable fonts: Fonts that can be displayed or printed at any size while retaining proportional letter thickness. (Ch. 9)

scale: (verb) The process of enlarging or reducing objects to fit properly on a sheet of paper. (noun) The ratio between the actual size of drawing objects and the size at which objects plot on a sheet of paper. (Ch. 30)

scale action: An action often used to scale some of the objects within a block independently of the other objects. (Ch. 26)

scale factor: The reciprocal of the drawing scale. (Ch. 9)

schematic block: A block originally drawn at a 1:1 scale and then inserted using the drawing scale factor for both the X and Y scale values. (Ch. 24, 30)

scroll bar: A bar tipped with arrow buttons used to scroll through a list of options or information. (Ch. 1)

section: A view that shows internal features as if a portion of the object is cut away. Also called sectional view or section view. (Ch. 23)

sectional view: A view that shows internal features as if a portion of the object is cut away. Also called sectional view or section view. (Ch. 23)

selected grip: A grip that you have picked to perform an operation. (Ch. 14)

selection set: A group of one or more selected objects, typically created to perform an editing operation on the selection. (Ch. 3)

shade: A specific color mixed with black. (Ch. 23)

sheet: The paper used to lay out and plot drawings. (Ch. 2) A printed drawing or electronic layout that displays project design requirements. (Ch. 32)

sheet list table: An AutoCAD table that references a table style and selected items in a sheet set to create a list of sheets in the sheet set and related information. (Ch. 32)

sheet selections: Groups of subsets and/or sheets that are often used to publish the same group of sheets. (Ch. 32)

sheet set: A collection of drawing sheets for a project; the AutoCAD tool that aids project organization. (Ch. 32)

sheet set placeholder: A temporary value for a field that later references specific properties for values. (Ch. 32)

sheet size: Size of the paper used to lay out and plot drawings. (Ch. 2, 28)

sheet view: A layout or model view saved for use in a sheet set; allows you to add views to layouts and insert callout and view label blocks. (Ch. 32)

shortcut key: Single key or key combination used to issue a command or select an option. Also called a keyboard shortcut. (Ch. 1)
shortcut menu: Context-sensitive menu available by right-clicking on interface items or objects. Menu content varies based on the location of the cursor and the current conditions, such as whether a tool is active or whether an object is selected. Also called cursor menu, right-click menu, or pop-up menu. (Ch. 1)

shoulder: A short horizontal line usually added to the end of straight leader lines. (Ch. 19)

single limits: Limit dimensions used when the specified dimension cannot be any more than the maximum or less than the minimum given value. (Ch. 20)

size dimensions: Dimensions that provide the size of physical features. (Ch. 17)

slider: A movable bar that increases or decreases a value when you slide the bar. (Ch. 1)

snap grid (snap resolution, snap): An invisible grid that allows the crosshairs to move in, or snap to, specified increments. (Ch. 3)

snapping: Picking a point near the intended position to have the crosshairs “snap” exactly to the specific point. (Ch. 3, 7)

soft copy: The electronic data file of a drawing. (Ch. 6)

solid model: A 3D model defined by object surfaces and volume; includes physical properties, such as mass and density, which you can analyze. (Ch. 1)

source object: When matching properties, the object with the properties you want to copy to other objects. (Ch. 14)

source points: Points to define the original position of an object during an ALIGN operation. (Ch. 13)

spatial index: A list of objects ordered according to their location in 3D space. (Ch. 31)

specific notes: Notes that relate to individual or specific features on the drawing. (Ch. 17)

specified dimension: The part of the dimension from which the limits are calculated. (Ch. 20)

spline: A true (mathematically correct) spline; a non-uniform rational B-spline (NURBS) curve. (Ch. 4)

spline curve: A curve that passes through the first and last fit points and is influenced by the other fit points. (Ch. 15)

spline interpolation: The mathematical process of locating unknown points along a spline based on existing known points. (Supplement 4C)

spotface: A larger-diameter hole machined at one end of a smaller hole that provides a smooth, recessed surface for a washer; similar to a counterbore, but not as deep. (Ch. 19)

stacked objects: Objects that overlap in a drawing. When you pick with the mouse, the topmost object is selected by default. (Ch. 3)

standards: Guidelines that specify drawing requirements, appearance, and techniques, operating procedures, and record keeping methods. (Ch. 1)

static columns: Columns in which you divide the text into a specified number of columns. (Ch. 9)

status toggle buttons: Buttons that toggle drawing aids and tools on and off. (Ch. 1)

sticky panel: A ribbon panel moved out of a tab and made to float in the drawing window. (Ch. 1)

stretch action: An action used to change the size and shape of block objects with a stretch operation. (Ch. 26)

subregion: The displayed portion of a clipped xref. (Ch. 31)
subsets: Groups of similar layouts, such as those in the same discipline, sometimes based on folder hierarchy. (Ch. 32)

sub-units: Unit formats smaller than the primary unit format. For example, centimeters can be defined as a sub-unit of meters. (Ch. 17)

suffixes: Special notes or applications placed after the dimension value. (Ch. 17)

surface model: A 3D model consisting of volumeless surfaces, such as planes and curved faces that represent the exterior of an object. (Ch. 1)

symbol library: A collection of related blocks, shapes, views, symbols, or other content. (Ch. 24)

symmetrical tolerance: The AutoCAD term for an equal bilateral tolerance. (Ch. 20)

system variable: A command that configures AutoCAD to accomplish a specific task or exhibit a certain behavior. The value of each variable is saved with the drawing, so the next time the drawing is opened, the value remains the same. (Ch. 5)

tangent: A line, circle, or arc that meets another circle or arc at only one point. (Ch. 4)

template: A file that contains standard drawing settings and objects for use in new drawings. Also called a drawing template. (Ch. 1, 2)

text: Lettering on a CADD drawing. (Ch. 9)

text boundary: An imaginary box that sets the location and width for multiline text. (Ch. 9)

text box: A box in which you type a name, number, or single line of information. (Ch. 1)

text editor: The area of the multiline or single-line text system where you type text. (Ch. 9)

text height: The specified height of text, which may be different from the plotting size for text scaled manually. (Ch. 9)

text style: A saved collection of settings for text height, width, oblique angle (slant), and other text effects. (Ch. 9)

tiled viewports: A window or frame within which a drawing is visible in model space. (Ch. 6)

tint: A specific color mixed with white. (Ch. 23)

tolerance: The total amount by which a specific dimension is permitted to vary. (Ch. 20)

tolerance stack: Text stacked vertically without a fraction bar. (Ch. 9)

tool: An instruction issued to the computer to complete a specific task. For example, use the LINE tool to draw lines. Also called a command. (Ch. 1)

toolbars: Interface items that contain tool buttons or drop-down lists. (Ch. 1)

tool buttons: Interface items used to start tools. (Ch. 1)

tool palette: A palette that contains tabs to help organize tools and other features. (Ch. 23)
tooltip: A pop-up that provides information about the item over which you hover. (Ch. 1)
tracking vectors: Temporary lines that display at specific angles, 0°, 90°, 180°, and 270° by default. (Ch. 7)

transparently: When referring to tool access, describes temporarily interrupting the active tool to use a different tool. (Ch. 6)

U

UCS: User coordinate system. (Ch. 19)

under-constrained: Describes a drawing that includes constraints, but not enough to size and locate all geometry. (Ch. 22)

unidirectional dimensioning: A dimensioning system in which all dimension values are displayed horizontally on the drawing. (Ch. 17)

unilateral tolerance: A tolerance style that permits a variation in only one direction from the specified dimension. (Ch. 20)

unit block: A 1D, 2D, or 3D block drawn to fit in a 1-unit, 1-unit-square, or 1-unit-cubed area so that it can be scaled easily. (Ch. 24)

unload: Suppress the display of an xref without removing the xref from the host drawing. (Ch. 31)

unselected grips: Grips that you have not yet picked to perform an operation. (Ch. 14)

update: The AutoCAD procedure for changing text in a field based on the current value of field. (Ch. 10)

user coordinate system (UCS): A temporary override of the WCS in which the origin (0,0,0) is moved to a location specified by the user. (Ch. 19)

user parameters: Additional parameters you define. (Ch. 22)

V

value set: A set of allowed values for a parameter. (Ch. 26)

variable: A text item that represents another value and is available for future reference. (Ch. 16)

verb/noun selection: Performing tasks in AutoCAD by activating a tool before selecting objects. (Ch. 14)

vertex: The point at which the two lines that form an angle meet. (Ch. 18)

views: 2D representations of an object. (Ch. 32)

view label block: A block that uses attributes containing fields that link the view name, number, and scale to drawing (sheet) views. (Ch. 32)

viewing-plane line: A thick dashed or phantom line identifying the viewing direction of a related view. (Ch. 8)

visibility parameter: A parameter that allows you to assign multiple views to objects within a block. (Ch. 27)

visibility states: Views created by selecting block objects to display or hide. (Ch. 27)

W

walkthrough: A computer simulation that follows a path through or around a 3D model. (Ch. 1)

wblock: A block definition saved as a separate drawing file. (Ch. 24)

WCS: World coordinate system. (Ch. 19)

wedges: The parts of a navigation wheel that contain navigation tools. (Ch. 6)

welding: The process of connecting the spaces between multiline elements. (Supplement 4B)

wireframe model: A 3D model consisting of lines and curves that connect at the corners of an object to form edges; contains no surface properties or solid mass. (Ch. 1)

working set: Nested objects selected for editing during a REFEDIT operation. (Ch. 31)
**workspace:** Preset work environment containing specific interface items. (Ch. 1)

**world coordinate system (WCS):** The AutoCAD rectangular coordinate system. In 2D drafting, the WCS contains four quadrants, separated by the X and Y axes. (Ch. 19)

**X**

**xline:** A construction line in AutoCAD that is infinite in both directions; often helpful for creating accurate geometry and multiviews. (Ch. 8)

**xref:** A DWG, DWF, DWFx, raster image, DNG, or PDF file incorporated into a drawing for reference only. Also called external reference. (Ch. 31)

**XY parameter:** A parameter that specifies distance properties in the X and Y directions. (Ch. 26)

**Z**

**zip file:** A file that contains one or more folders and/or files compressed using the Windows ZIP file format. (Ch. 32)

**zones:** A system of letters and numbers used on large drawings to help direct the attention of the person reading the print to a location on the drawing. (Ch. 25)

**zoom:** Make objects appear bigger (zoom in) or smaller (zoom out) on the screen without affecting their actual size. (Ch. 3, 6)

**zoom in:** Change the display area to show a smaller part of the drawing at a higher magnification. (Ch. 3, 6)

**zoom out:** Change the display area to show a larger part of the drawing at a lower magnification. (Ch. 3, 6)