

# Glossary of CAD Terms

**1D unit block:** A 1-unit, one-dimensional object, such as a straight line segment, saved as a block.

**2D unit block:** A 2D object that fits into a 1-unit × 1-unit square, saved as a block.

**3D unit block:** A 3D object that fits into a 1-unit × 1-unit × 1-unit cube, saved as a block.

## A

**absolute coordinates:** Coordinate distances measured from the origin.

**absolute path:** A path to a file defined by the location of the file on the computer system.

**absolute value:** In property settings, a value set directly instead of referenced by a layer or a block. An absolute value ignores the current layer settings.

**acquired point:** A point found by moving the crosshairs over a point on an existing object to reference the point when picking a new point.

**action:** A definition that controls how dynamic block parameters behave.

**action bars:** Toolbars that allow you to view, remove, and adjust actions.

**action parameter (parameter):** A specification for block construction that controls block characteristics such as positions, distances, and angles of dynamic block geometry.

**alert:** A pop-up that indicates a required action or potential problem.

**aligned dimensioning:** A dimensioning system in which dimension values align with dimension lines.

**aligned section:** Section used when a feature is out of alignment with the center plane.

**alignment parameter:** A parameter that aligns a block with another object in the drawing.

**alignment paths:** Temporary lines and arcs that coincide with the position of existing objects.

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

**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.

**annotation:** Textual information presented in notes, specifications, comments, and symbols.

**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.

**annotation scale:** The scale AutoCAD uses to calculate the scale factor applied to annotative objects.

**annotative object representation:** Display of an annotative object at an annotation scale that the object supports.

**annotative objects:** AutoCAD objects that can adapt automatically to the current drawing scale.

**annotative text:** Text scaled by AutoCAD according to the specified annotation scale.

**arc:** Any portion of a circle, usually dimensioned according to the radius (R).

**archiving:** Gathering and storing all drawings and associated files related to a project.

**array:** Multiple copies of an object arranged in a pattern.

**array action:** An action used to array objects within the block based on preset specifications.

**associated list:** The ASME term describing tables added or related to engineering drawings.

**associative array:** An adjustable array object; all items are grouped to form a single object, allowing you to make modifications such as changing the number of items and spacing between items.

**associative dimension:** A dimension associated with an object. The dimension value updates automatically when the object changes.

**associative hatch pattern:** A hatch pattern that updates automatically when you edit associated objects.

**attachment:** An xref linked with or referenced into the current drawing.

**attributes:** Text-based data assigned to a specific object. Attributes turn a drawing into a graphical database.

**auto-fill:** A table function that fills selected cells based on the contents of another cell.

**automatic save:** A save procedure that occurs at specified intervals without your input.

**automatic windowing (implied windowing):** A selection method that allows you to select multiple objects at one time without entering a selection option.

**auxiliary view:** View used to show the true size and shape of a foreshortened surface.

**background mask:** A mask that hides a portion of objects behind and around text so that the text is unobstructed.

**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.

**base dimension:** The dimension line that remains in the same location, with which other dimension lines align or space.

**baseline dimensioning:** A method of dimensioning in which several dimensions originate from a common surface, centerline, or center plane.

**base point:** The initial reference point AutoCAD uses when stretching, moving, copying, and scaling objects.

**base point parameter:** A parameter that defines an alternate base point for a block.

**basic dimension:** A theoretically perfect dimension used to describe the exact size, profile, orientation, and location of a feature.

**big font:** A supplement that provides Asian and other large-format fonts that have characters and symbols not present in other font files.

**bilateral tolerance:** A tolerance style that permits variance in both the positive and negative directions from the specified dimension.

**bind:** Convert an xref to a permanently inserted block in the host drawing.

**block:** An object, such as a symbol, saved and stored in a drawing for future use.

**block definition:** Information about a block stored within the drawing file.

**block insertion tools:** Blocks located on a tool palette.

**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.

**block reference:** A specific instance of a block inserted into a drawing.

**boundary:** The area filled by a hatch.

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

**boundary set:** The part of the drawing AutoCAD evaluates to define a boundary.

**broken-out section:** Section that shows a small portion of the object removed.

**BSI:** British Standards Institution.

**button:** A “hot spot” button on the screen that you pick to access an application, command, or option.

## C

**callout block:** A block that uses attributes containing fields that link the view number and sheet title between the sheet set and drawing (sheet) views.

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

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

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

**centroid:** The mathematical center of a geometric figure.

**chain action:** An action that triggers another action when you modify a parameter.

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

**chamfer:** In mechanical drafting, a small, angled surface used to relieve a sharp corner.

**change set:** A grouping of objects that differ between two drawing files selected for comparison with the **COMPARE** command.

**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.

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

**child:** A style override.

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

**circle:** A closed curve with a constant radius (R) around a center point; usually dimensioned according to the diameter ( $\varnothing$ ).

**circular reference error:** An error that occurs when a block definition references itself.

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

**coincident:** A geometric construction that specifies two points sharing the same position.

**color-dependent plot style table:** A file that contains plot style settings used to assign plot values to object colors.

**command:** An instruction issued to the computer to complete a specific task. For example, use the **LINE** command to draw line objects.

**command alias:** Abbreviated command name entered at the keyboard.

**command line:** Area where you can type commands (command names) and type or select command options.

**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.

**composition:** The spacing, layout, and appearance of text.

**computer-aided design and drafting (CADD):** The process of using a computer with CADD software to design and produce drawings and models.

**concentric:** Describes arcs, circles, and/or ellipses sharing the same center point.

**configured:** Installed and ready to use.

**constant:** An expression or value that stays the same.

**constraint parameters:** Dimensional constraints available for block construction to control the size or location of block geometry numerically.

**construction lines:** Lines commonly used to lay out a drawing.

**context-oriented help:** Help information for the active command.

**context-sensitive:** Specific to the active command or option.

**continued dimensioning:** The AutoCAD term for chain dimensioning.

**control code sequence:** A key sequence beginning with %% that defines symbols in text.

**control vertices:** Points that are used to define the curve shape and change the curve design. Adding control points typically increases the complexity of the curve.

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

**conventional dimensioning:** Dimensioning without the use of geometric tolerancing.

**coordinate dimensioning:** A method of dimensioning angles in which dimensions locate the corner of the angle.

**coordinates:** Numerical values used to locate a point in the drawing area.

**copy and paste:** A Windows function that allows you to copy an object from one location to the Windows Clipboard and then paste it to another location.

**counterbore:** A larger-diameter hole machined at one end of a smaller hole that provides a place for the fastener head.

**countersink:** A cone-shaped recess at one end of a hole that provides a mating surface for a fastener head of the same shape.

**cubic curve:** A very smooth curve created by the **PEDIT Spline** option with **SPLINETYPE** set at 6.

**current layer:** The active layer. Whatever you draw is placed on the current layer.

**curve fitting:** Converting a polyline into a series of smooth curves.

**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.

**cutting-plane line:** The line that cuts through the object to expose internal features.

**cycle:** Repeatedly select a series of stacked objects until the desired object is highlighted.

## D

**datum:** Theoretically perfect surface, plane, point, or axis from which measurements can be taken.

**default:** A value maintained by the computer until changed.

**deferred perpendicular:** A calculation of the perpendicular point that is delayed until you pick another point.

**deferred tangency:** A calculation of the point of tangency that is delayed until you pick both points.

**definition points (defpoints):** The points used to specify the location of the dimension and the dimension text.

**demand loading:** Loading only the portion of an xref file necessary to regenerate the host drawing.

**dependent objects:** Named objects in a drawing that have been inserted or referenced into another drawing.

**destination object:** When matching properties, the object that receives the properties of the source object.

**destination points:** Points to define the new location of objects during an **ALIGN** operation.

**detach:** Remove an xref from a host drawing.

**deviation tolerance:** The AutoCAD term for an unequal bilateral tolerance.

**dialog box:** A window-like item that contains various settings and information.

**diameter:** The distance across a circle measured through the center; usually represented on a drawing with the Ø symbol.

**dimension:** A description of the size, shape, or location of features on an object or structure.

**dimension style:** A saved configuration of dimension appearance settings.

**dimension style override:** A temporary alteration of dimension style settings that does not actually modify the style.

**dimension variables:** System variables that store the values of dimension style settings.

**dimensional constraint parameters:** Parameters that form when you insert a dimensional constraint.

**dimensional constraints:** Measurements that numerically control the size or location of geometry.

**dimensional input:** An instinctive dynamic input point entry technique, similar to polar coordinate entry.

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

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

**direct distance entry:** Entering points by positioning the crosshairs to establish direction and typing a number to specify distance.

**displacement:** The direction and distance in which an object moves.

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

**double-click:** Quickly press the left mouse button twice.

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

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

**drawing files:** Files you use to create and store drawings.

**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.

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

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

**drawing template files (templates):** Files you reference to develop new drawings; contain standard drawing settings and objects.

**drawing units:** The standard linear and angular units and measurement precision.

**drawing window (graphics window):** The largest area in the AutoCAD window, where drawing and modeling occurs.

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

**dynamic block:** An adjustable block to which you can assign parameters, actions, and geometric constraints and constraint parameters.

**dynamic columns:** Columns calculated automatically by AutoCAD according to the amount of text and the specified height and width of the columns.

**dynamic format:** A dimensional constraint format used specifically for controlling the size or location of geometry.

**dynamic input:** Area near the crosshairs where you can type commands (command names), type or select command options, and view context-oriented information.

## E

**editing:** A procedure used to modify an existing object.

**ellipse:** An oval shape that contains two centers of equal radius.

**escape key:** Keyboard key used to cancel a command or exit a dialog box.

**example sheet set:** An existing sheet set used as a template for developing a new sheet set.

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

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

**external reference (xref):** A DWG, raster image, DWF, DWFx, DGN, PDF, Navisworks (NWD or NWC), or point cloud file incorporated into a drawing for reference only.

**extract:** Gather content from the drawing file database to display in the drawing or in an external document.

**extracted:** Temporarily removed from the drawing for editing purposes.

## F

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

**field:** A text object that can display a specific property value, setting, or characteristic.

**file properties:** Values used to define a variety of file and design characteristics.

**fillet:** A rounded interior corner used to relieve stress or ease the contour of inside corners.

**fit curve:** A curve that passes through all of its fit points.

**fit format:** The arrangement of dimension text and arrowheads on a drawing.

**fit points:** Points through which a spline passes that determine the shape of the spline.

**flip action:** An action used to flip the entire block or selected objects within the block.

**flip parameter:** A parameter that mirrors selected objects within a block.

**float:** Describes interface items that appear within a frame and that you can resize or move.

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

**flyout:** A set of related buttons that appears when you pick the arrow next to certain command buttons.

**flythrough:** A computer simulation that replicates flying through or around a 3D model.

**font:** The face design of a letter or number.

**foreshortened:** Describes a surface at an angle to the line of sight. Foreshortened surfaces appear shorter than their true size and shape.

**formulas:** Mathematical expressions that allow you to perform calculations within table cells.

**full section:** Section that shows half the object removed.

**fully constrained:** Describes a drawing in which objects have no freedom of movement.

**function:** An expression or value that asks for user input to get values to pass to the expression.

**function keys:** The keys labeled [F1] through [F12] along the top of the keyboard.

## G

**gap tolerance:** The amount of gap allowed between segments of a boundary to be hatched.

**GB:** Chinese Guóbiāo.

**general notes:** Notes that apply to the entire drawing.

**geographic data:** Information added to a drawing to describe specific locations and directions on Earth.

**geometric constraint bars:** Toolbars that allow you to view and remove geometric constraints.

**geometric constraints:** Geometric characteristics applied to restrict the size or location of geometry.

**geometric dimensioning and tolerancing (GD&T):** The dimensioning and tolerancing of individual features of a part where the permissible variations relate to characteristics of form, profile, orientation, runout, or the relationship between features.

**global attribute editing:** Editing or changing all insertions, or instances, of the same block in a single operation.

**global layer settings:** Layer settings applied to both model space and paper space.

**global linetype scale:** A linetype scale applied to every linetype in the current drawing.

**GOST:** Gosudarstvennyy Standart, maintained by the Euro-Asian Council for Standardization, Metrology, and Certification.

**grab bar:** Thin bar at the edge of a docked or floating interface item that you can use to move the item.

**gradient fill:** A shading transition between the tones of one color or two separate colors.

**graphic pattern:** A patterned arrangement of objects or symbols.

**graphical user interface (GUI):** On-screen features that allow you to interact with software.

**grid:** A pattern of lines that appears on-screen for reference, analogous to graph paper.

**grips:** Small boxes that appear at strategic points on a selected object, allowing you to edit the object directly.

**grouped balloons:** Balloons that share the same leader, which typically connects to the most obviously displayed component.

**gutter:** The space between columns of text.



**half section:** Section that shows one-quarter of the object removed.

**hard copy:** A physical drawing produced by a printer or plotter.

**hatches (hatch patterns):** AutoCAD section line symbols and graphic patterns.

**hexagon:** A six-sided regular polygon.

**host drawing:** The drawing into which xrefs are incorporated.

**hover:** Pause the cursor over an item to display information or options.

**hyperlinks:** Links in a document that connect it to related information in other documents or on the Internet.



**icon:** Small graphic representing an application, file, or command.

**implied intersection:** The point at which objects would meet if they were extended.

**included angle:** The angle formed between the center, start point, and endpoint of an arc.

**infer:** Automatically detect and apply using logic.

**inscribed polygon:** A polygon drawn inside an imaginary circle so that the corners of the polygon touch the circle.

**insertion base point:** The point on a block that defines where the block is positioned during insertion.

**interface:** Items that allow you to input data to and receive outputs from a computer system.

**island:** A closed area inside a boundary.

## J

**JIS:** Japanese Industrial Standards.

**justification point:** The point from which text is justified according to the current justification option.

**justify:** Align the margins or edges of text. For example, left-justified text aligns along an imaginary left border.

## K

**key point:** The point on a selected object that you use to manipulate the object.

## L

**landing:** The AutoCAD term for a leader shoulder.

**landscape:** A horizontal paper orientation.

**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**.

**layer index:** A list of objects ordered according to the layers to which they are assigned.

**layer property overrides:** Color, linetype, lineweight, transparency, and plot style properties applied to specific viewports in paper space.

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

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

**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.

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

**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.

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

**limits:** The size of the virtual drawing area in model space.

**line conventions:** Standards related to line thickness, type, and purpose.

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

**linear parameter:** A parameter that creates a measurement reference between two points.

**linetype scale:** The lengths of dashes and spaces in linetypes.

**lineweight:** The assigned width of lines for display and plotting.

**list box:** A framed area that contains a list of items or options from which to select.

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

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

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

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

## M

**major axis:** The longer of the two axes in an ellipse.

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

**markers:** Visual cues that appear at the snap point to confirm object snap mode and location.



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

**master drawing:** A host drawing created by attaching several frequently used xrefs.

**minor axis:** The shorter of the two axes in an ellipse.

**mirror line:** The line of symmetry across which objects are mirrored.

**model:** A term that usually describes a 3D model, but in AutoCAD also refers to 2D drawing geometry, typically created at full size.

**model space:** The environment in AutoCAD where the majority of drawing usually occurs, including the design and drafting of drawing views.

**model view:** A drawing file or named model space view added to a layout to create a sheet view.

**model (tiled) viewport:** A window or frame within which a drawing is visible in model space.

**move action:** An action used to move a block object independently of other objects in the same block.

**multileader styles:** Saved configurations for the appearance of leaders.

**multiview drawing:** A presentation of drawing views created through orthographic projection.

## N

**named objects:** Blocks, dimension styles, groups, layers, linetypes, materials, multileader styles, plot styles, shapes, table styles, text styles, and visual styles that have specific names.

**named plot style table:** A file that contains plot style settings used to assign plot values to objects or layers.

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

**navigation wheel:** A steering wheel designed for use in a specific drawing setting or with a particular type of drawing.

**nested xrefs:** Xrefs contained within other xrefs.

**nesting:** Creating a block that includes other blocks.

**non-associative array:** An array of copied, or static, source objects that do not form a single adjustable array object.

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

**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.

**non-breaking space:** A symbol that you insert in place of a space to keep separate words together on one line.

**non-uniform rational basis spline (NURBS, B-spline):** The mathematics used by most surface modeling CADD systems to produce accurate curves and surfaces.

**noun/verb selection:** Performing tasks in AutoCAD by selecting the objects before activating a command.

**nudging:** Moving objects orthogonally by selecting the objects and using the arrow keys on the keyboard.

## O

**object snap:** A tool that locates an exact point, such as an endpoint, midpoint, or center point, on or in relation to an existing object.

**object snap override:** A method of isolating a specific object snap mode while using a drawing or editing command. The selected object snap temporarily overrides the running object snap modes.

**object snap tracking:** A drawing aid that provides horizontal and vertical alignment paths for locating points after a point is acquired with object snap.

**offset section:** Section that has a staggered cutting plane.

**option:** A choice associated with a command or an alternative function of a command.

**order:** In a spline, the degree of the spline polynomial + 1.

**ordinate dimensioning:** The AutoCAD term for rectangular coordinate dimensioning without dimension lines.

**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.

**ortho:** From *orthogonal*, which means “at right angles.”

**orthographic projection:** Projecting object features onto an imaginary plane.

**over-constrained:** Describes a drawing that contains too many constraints.

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

**overlay system:** A system of separating drawing components by layer.

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

## P

**page setup:** A saved collection of settings required to create a finished plot of a drawing.

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

**pan:** Move the drawing display to view different portions of the drawing without changing the magnification.

**paper (layout) space:** The environment in AutoCAD where you create layouts for plotting and display purposes.

**paper text height:** The plotted text height.

**paragraph alignment:** The alignment of multiline text inside the text boundary.

**parallel:** A geometric construction that specifies that objects such as lines remain parallel and will never intersect, no matter how long they become.

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

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

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

**parameter label:** A label that indicates the purpose of a parameter.

**parameters (constraints):** Geometric characteristics and dimensions that control the size, shape, and position of drawing geometry.

**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.

**parent:** The dimension style from which a style override is formed.

**parent xref:** An xref that contains one or more other xrefs.

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

**partial open:** Describes opening a portion of a file by specifying only the views and layers you want to see.

**path array:** A pattern of objects drawn in reference to another object, or path.

**perpendicular:** A geometric construction that defines a 90° angle between objects such as lines.

**pick (click):** Press the left mouse button.

**pick box:** A small box that replaces the crosshairs when the Select objects: prompt is active.

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

**plot spooler:** A disk drive with memory that allows you to plot files.

**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.

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

**plot styles:** Configurations of properties, including color, linetype, lineweight, line end treatment, and fill style, that are applied to objects for plotting purposes only.

**plus-minus dimensioning:** A dimensioning system in which a variance from the dimension applies in both the positive (+) and negative (-) directions or in one direction only.

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

**point of tangency:** The point shared by tangent objects.

**point parameter:** A parameter that defines an XY coordinate location in the drawing.

**pointer input:** The process of entering points using dynamic input.

**polar (circular) array:** A circular pattern of objects.

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

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

**polar parameter:** A parameter that includes a distance property and an angle property.

**polar stretch action:** An action used to change the size, shape, and rotation of block objects with a stretch operation.

**polar tracking:** A drawing aid that causes

the drawing crosshairs to “snap” to predefined angle increments.

**polygon:** A closed plane figure with at least three sides, such as a triangle or rectangle.

**polyline:** A series of lines and arcs that constitute a single object.

**polyline vertex:** The point at which two polyline segments meet.

**portrait:** A vertical paper orientation.

**prefix:** A special note or application placed before the dimension value.

**preview box:** An area in a dialog box that shows the results of the options and settings you select.

**projection plane:** An imaginary projection plane parallel to the surface of an object.

**publishing:** Preparing a sequential set of multiple drawings for hard copy or electronic plotting of the set.

**purge:** To remove unused items, such as block definitions and layers, from the drawing.

## Q

**quadrant:** A point on the circumference at the horizontal or vertical quarter of a circular object, such as a circle, arc, ellipse, or polyline.

**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.

## R

**radio button:** A selection that activates a single item in a group of options.

**radius:** The distance from the center of a circle to its circumference; always one-half the diameter; usually represented on a drawing with the R symbol.

**ray:** A linear AutoCAD object that is infinite in one direction only; considered semi-infinite.

**read-only:** Describes a drawing file opened for viewing only. You can make changes to the drawing, but you cannot save changes without using the **SAVEAS** command.

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

**realtime panning:** A panning operation in which you can see the drawing move on-screen as you pan.

**realtime zoom:** A zoom that you view as it occurs.

**rectangular array:** A pattern made up of columns and rows of objects.

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

**rectangular coordinate system:** A system for locating dimensions from surfaces, centerlines, or center planes using linear dimensions.

**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.

**redrawing:** A process that was once useful for refreshing the screen display without regenerating the drawing.

**reference dimension:** A dimension used for reference purposes only. Parentheses enclose reference dimensions to differentiate them from other dimensions.

**reference editing:** Editing reference drawings from within the host file.

**reference file:** An xref; a file referenced by the host drawing.

**regenerating:** Recalculating and redisplaying all objects on-screen to correspond to the information in the file database.

**region:** A closed 2D area that has physical properties such as a centroid and product of inertia.

**regular polygon:** A closed geometric figure with three or more equal sides and equal angles.

**relative coordinates:** Coordinates specified from, or relative to, the previous coordinate, rather than from the origin.

**relative operators:** In math, functions that determine the relationship between data items.

**relative path:** A path to a file defined according to the location of the file relative to the host drawing.

**reload:** Update an xref in the host drawing.

**removed section:** Standard section view, but removed from direct projection from the cutting plane.

**removed view:** A view removed from alignment with other views when drawing space is unavailable.

**repetitive features:** Multiple features having the same shape and size.

**resource drawings:** Drawing files that include named model space views referenced for use as sheet views.

**revision cloud:** A polyline of sequential arcs used to form a cloud shape around changes in a drawing.

**revision history block:** A block that provides space for the revision letter, a description of the change, the date, and approvals.

**revolved section:** Section that clarifies the contour of an object that has the same shape throughout its length.

**ribbon panels (panels):** Divided areas in the ribbon that group commands.

**right-click:** Press the right mouse button.

**root point:** The first point specified to create a construction line or ray.

**rotate action:** An action used to rotate objects within a block without affecting the other objects in the block.

**rotation parameter:** A parameter that allows objects in a block to rotate independently of the block.

**round:** A rounded exterior corner used to remove sharp edges or ease the contour of exterior corners.

**rubberband line:** A reference line that extends from the crosshairs in certain drawing commands after you make the first selection.

**running object snaps:** Object snap modes that run in the background during all drawing and editing procedures.

## S

**scalable fonts:** Fonts that can be displayed or printed at any size while retaining proportional letter thickness.

**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.

**scale action:** An action used to scale some of the objects within a block independently of the other objects.

**scale factor:** The reciprocal of the drawing scale.

**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.

**scroll bar:** A bar tipped with arrow buttons used to scroll through a list of options or information.

**section lines:** Lines that show where material is cut away.

**section view (sectional view, section):** A view that shows internal features as if a portion of the object is cut away.

**selected grip:** A grip that you have picked to perform an operation.

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

**shade:** A specific color mixed with black.

**sheet:** A printed drawing or electronic layout that displays project design requirements.

**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.

**sheet selections:** Groups of subsets and sheets that are often used to publish the same group of sheets.

**sheet set:** A collection of drawing sheets for a project; the AutoCAD tool that aids project organization.

**sheet set placeholder:** A temporary value for a field that later references specific properties for values.

**sheet size:** The size of the paper used to lay out and plot drawings.

**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.

**shortcut key (keyboard shortcut):** Single key or key combination used to issue a command or select an option.

**shortcut menu (cursor menu, right-click menu, pop-up menu):** A general or context-sensitive menu available by right-clicking on interface items or objects.

**shoulder:** A short horizontal line usually added to the end of straight leader lines.

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

**size dimensions:** Dimensions that provide the size of physical features.

**slider:** A movable bar that increases or decreases a value when you slide the bar.

**snap grid (snap resolution, snap):** An invisible grid that allows the crosshairs to move in, or snap to, specified increments during the drawing or editing process.

**snapping:** Picking a point near the intended position to have the crosshairs “snap” exactly to the specific point.

**soft copy:** The electronic data file of a drawing.

**solid model:** The most complex 3D model—contains information about object edges, vertices, surfaces, and mass; solid models enclose a volume.

**source object:** When matching properties, the object with the properties you want to copy to other objects.

**source points:** Points to define the original position of objects during an **ALIGN** operation.

**spatial index:** A list of objects ordered according to their location in 3D space.

**specific notes:** Notes that relate to individual or specific features on the drawing.

**specified dimension:** The part of the dimension from which the limits are calculated.

**spline:** A curve that uses a series of control points and other mathematical principles to define the location and form of the curve.

**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.

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

**standards:** Guidelines that specify drawing requirements, appearance, techniques, operating procedures, and record-keeping methods.

**static columns:** Columns in which you divide the text into a specified number of columns.

**status toggle buttons:** Buttons that toggle drawing aids and commands on and off.

**sticky panel:** A ribbon panel moved out of a tab and made to float in the drawing window.

**stretch action:** An action used to change the size and shape of block objects with a stretch operation.

**subregion:** The displayed portion of a clipped xref.

**subsets:** Groups of similar layouts, such as those in the same discipline, sometimes based on folder hierarchy.

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

**suffix:** A special note or application placed after the dimension value.

**surface model:** A 3D model that contains information about object edges, vertices, and the outer boundaries of the object, known as *surfaces*; surface models have zero thickness, lack mass, and may not enclose a volume.

**symbol library:** A collection of related blocks, shapes, views, symbols, or other content.

**symmetrical tolerance:** The AutoCAD term for an equal bilateral tolerance.

**system variable:** A named definition that stores a value and configures AutoCAD to accomplish a specific task or exhibit a certain behavior.

## T

**tab:** A small stub at the top or side of a page, window, dialog box, or palette that allows you to access other portions of the item.

**table:** An arrangement of rows and columns that organize data to make it easier to read.

**table indicator:** The grid of letters and numbers that identify individual cells in a table.

**table style:** A saved collection of table settings, including direction, text appearance, and margin spacing.

**tabular dimensioning:** A form of rectangular coordinate dimensioning without dimension lines in which dimensions appear in a table.

**tangent:** A line, circle, or arc that meets another circle or arc at only one point.

**text:** Lettering on a CADD drawing.

**text boundary:** An imaginary box that sets the location and width for multiline text.

**text box:** A box in which you type a name, number, or single line of information.

**text editor:** The area of the multiline or single-line text system where you type text.

**text height:** The specified height of text, which may be different from the plotting size for text scaled manually.

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

**tint:** A specific color mixed with white.

**tolerance:** The total amount by which a specific dimension is permitted to vary.

**tolerance buildup:** Accumulation that occurs when the tolerance of each individual dimension builds on the next.

**tolerance stack:** Text stacked vertically without a fraction bar.

**toolbars:** Interface items that contain tool buttons or drop-down lists.

**tool buttons:** Interface items used to start commands.

**tool palette:** A palette that contains tabs to help organize commands and other features.

**tooltip:** A pop-up that provides information about the item over which you hover.

**tracking vectors:** Temporary lines that display at specific angles, 0°, 90°, 180°, and 270° by default.

**transparently:** When referring to command access, describes temporarily interrupting the active command to use a different command.

## U

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

**unidirectional dimensioning:** A dimensioning system in which all dimension values are displayed horizontally on the drawing.

**unilateral tolerance:** A tolerance style that permits a variation in only one direction from the specified dimension.

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

**unload:** Suppress the display of an xref without removing the xref from the host drawing.

**unselected grips:** Grips that you have not yet picked to perform an operation.

**update:** The AutoCAD procedure for changing text in a field to reflect the current value.

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

**user parameters:** Additional parameters you define.

## V

**value set:** A set of allowed values for a parameter.

**variable:** A text item that represents another value and is available for future reference.

**verb/noun selection:** Performing tasks in AutoCAD by activating a command before selecting objects.

**vertex:** The point at which the two lines that form an angle meet.

**view:** 2D representation of an object.

**viewing-plane line:** A thick dashed or phantom line identifying the viewing direction of a related view.

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

**view tools:** AutoCAD display commands, options, and settings.

**visibility parameter:** A parameter that allows you to assign multiple views to objects within a block.

**visibility states:** Views created by selecting block objects to display or hide.

## W

**walkthrough:** A computer simulation that replicates walking through or around a 3D model.

**wblock:** A block definition saved as a separate drawing file.

**wedges:** The parts of a navigation wheel that contain navigation commands.

**wireframe model:** The most basic 3D model—contains only information about object edges and the points where edges intersect, known as *vertices*; describes the appearance of the model as if it were constructed from wires.

**working set:** Nested objects selected for editing during a **REFEDIT** operation.

**workspace:** A preset work environment containing specific interface items.

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

## X

**xline:** A construction line in AutoCAD that is infinite in both directions; helpful for creating accurate geometry and multiview drawings.

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

## Z

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

**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.

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

**zoom in:** Change the display area to show a smaller part of the drawing at a higher magnification.

**zoom out:** Change the display area to show a larger part of the drawing at a lower magnification.