

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.

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, linewidth, 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.