

AutoSketch® 10

Create and Trim Entities

Autodesk®

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Tutorial I — Create and Trim Entities

In this tutorial, you learn how to start AutoSketch®, create a drawing, and create entities. You also learn how to trim entities using several methods.

More information about each of the concepts in this tutorial is available in the Help system.

In this tutorial

- Start AutoSketch
- Create Simple Entities
- Create Lines
- Create Other Simple Entities
- Trim an Entity

Start AutoSketch

In this exercise, you learn to

- Start AutoSketch.
- Create a drawing from scratch.

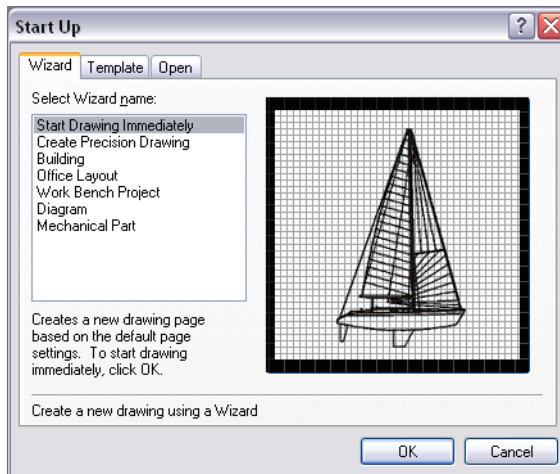
Note At the end of each exercise, you can take a break or move to the next exercise. Be sure to save your work at the end of each exercise, because each subsequent exercise builds on the one before it.

To start AutoSketch

- 1 On the Start menu (Windows), click All Programs (or Programs) ► Autodesk AutoSketch 10.
- 2 In the Tip of the Day dialog box, read the tip and click Close.

To start a drawing

- 1 In the Start Up dialog box, Wizard tab, select Start Drawing Immediately.



- 2 Click OK.

Create Simple Entities

In the exercises that follow, you become familiar with simple entities by creating lines, arcs, circles, polygons, and polylines. While you create entities, you also become familiar with the AutoSketch drawing window and how the menus and toolbars can be used to create entities. In a later tutorial, you learn how to create useful drawings with entities and symbols. But for now, have fun creating simple entities.

Create Lines

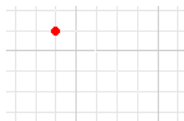
In this exercise, you learn to

- Create a single line, a multiline, and a double line.
- Create lines using the Draw menu and the All-In-One toolbar.
- Right-click a toolbar button to access related buttons on a toolset.
- Right-click a command to end it.
- Use the SHIFT key to select multiple entities.
- Delete entities.

A line is an entity that connects two points. You can use a line to represent any straight object.

To create a line

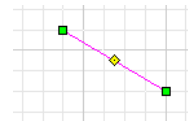
- 1 In AutoSketch, on the File menu, click New.
- 2 In the New dialog box, click Start Drawing Immediately, and then click OK.
- 3 On the Draw menu, click Line ► Single.
- 4 In the drawing window, click anywhere to create the startpoint of the line. Then, click another point in the drawing window to create the endpoint. Right-click to end the command.



Click a startpoint



Click an endpoint

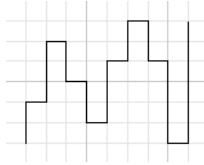


Right-click to end
LINE command

Example of a line produced with the Line Single option

You have just created a line, your first computer-drawn entity. Continue to draw lines until you feel comfortable with the action. When you are ready, you can create a line that has multiple points.

- 5 On the Draw menu, click Line ► Multiple.
- 6 In the drawing window, click anywhere to create the startpoint of the line. Then, click another point in the drawing window to create a second line point. Continue clicking to create additional points. When you are finished, right-click to complete the line.



Example of a line produced with the Line Multiple option

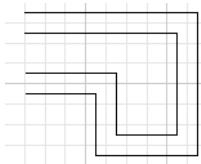
Now, use the All-In-One toolbar to create a line. When you click and hold the Line button on the All-In-One toolbar, you see additional buttons called *toolsets*. Hovering over a button displays a tooltip with the name of the button. When you end the command, the new button is shown on the toolbar. The last button used is what appears on the toolbar, until a new button is used.



- 7 On the All-In-One toolbar, click and hold the Line button.



- 8 On the toolset, drag the pointer until you locate Line Double, and then release the mouse button.
- 9 Click anywhere in the drawing to create the startpoint of the line. Then, click another point in the drawing window to create a second line point. Continue clicking to create additional points. When you are finished, right-click to complete the line.



Example of a line produced with the Line Double option

You may want to clean up your drawing at this point so that you have room to draw more entities.

To delete entities

- On the keyboard, press CTRL+A to select all entities in the drawing, and then press the DELETE key.

Now that you understand how to create different kinds of lines using the Draw menu and the All-In-One toolbar, you can create other entities.

Create Other Simple Entities

In this exercise, you learn to

- Create arcs, circles, polylines, and polygons.
- Select startpoints, midpoints, and endpoints.
- Use the All-In-One toolbar to create entities.
- Use the All-In-One toolbar to access toolset tools.

In this exercise, you create variations of an arc, a circle, a polyline, and a polygon.

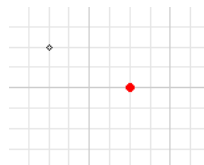
- **Arc.** A segment of a circle defined by a centerpoint, radius, starting angle, and included angle.
- **Circle.** An entity with a centerpoint and a radius.
- **Polyline.** A multi-segmented line (the segments can be straight or curved). Use a polyline to determine the total length of a series of connected segments.
- **Polygon.** A polyline whose startpoints and endpoints are connected (closed) to create a shape with multiple sides.

To create an arc

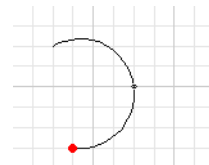
- 1 On the Draw menu, click Arc ► 3 Points.
- 2 In the drawing window, click a point to begin the arc, click a second point, and then click another point to end the arc. Try this a few times to get familiar with it.



Click startpoint



Click second point



Click endpoint

Example of an arc produced with the Arc 3 Points option

Now, use the All-In-One toolbar to create a different kind of arc.

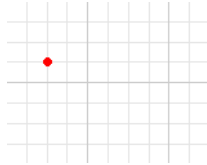


3 On the All-In-One toolbar, click and hold the Arc button.

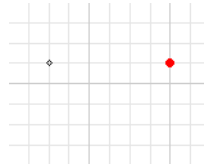


4 On the toolset, drag the pointer until you locate 2 Points and Center, and then release the mouse button.

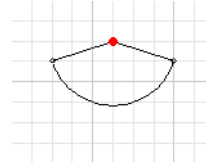
5 In the drawing window, click a point to begin the arc. Click another point to mark the second point. Then, click again to mark the centerpoint.



Click startpoint



Click second point



Click centerpoint

Example of an arc produced with the 2 Points and Center option

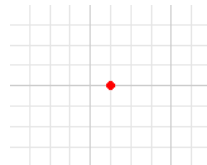
Tip The status bar, in the lower-left corner of the drawing window, displays prompts that describe the next step in a procedure. If you're unsure what the next step is, look at the status bar for prompts.

6 When you finish working with arcs, delete the entities.

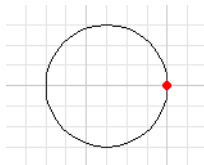
To create a circle

1 On the Draw menu, click Circle ► Center, Side.

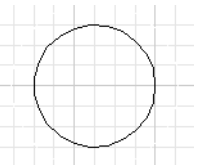
2 In the drawing window, click a point to set the center of the circle, and then drag the pointer out from the center until the circle is the size you want. Then, click at that point to complete the circle. Try this a few times to get familiar with it.



Click a point



Drag pointer outward



Click to complete circle

Example of a circle produced with the Center, Side option



- 3 On the All-In-One toolbar, click and hold the Circle button, and on the toolset, click any of the Circle buttons. Create new circles in your drawing.
- 4 When you finish working with circles, delete the entities.

To create a polyline



- 1 On the All-In-One toolbar, click and hold the Polyline button.
- 2 On the toolset, drag the pointer until you locate Single Polyline, and then release the mouse button.
- 3 In the drawing window, click a point to begin the polyline, and then click two more points to create a polyline that is shaped like the letter “V”. When you have created your polyline, right-click twice to complete the line and end the polyline command. Try this a few times to get familiar with it.



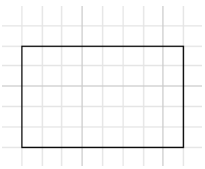
Example of a polyline produced with the Single Polyline option

- 4 On the All-In-One toolbar, click and hold the Polyline button, and on the toolset, click any of the Polyline buttons. Experiment with the different kinds of polylines you can create.
- 5 When you finish working with polylines, delete the entities.

To create a polygon



- 1 On the All-In-One toolbar, click the Polygon button.
- 2 On the toolset, drag the pointer until you locate Rectangle, and then release the mouse button.
- 3 In the drawing window, click a point to begin the rectangle, and then click another point to end the rectangle.



Example of a polygon produced with the Rectangle option

- 4 On the All-In-One toolbar, click and hold the Polygon button, and on the toolset, click any of the Polygon buttons. Create new polygons in your drawing.

When you finish working with polygons, close the drawing.

- 5 On the File menu, click Close. In the Save Changes to Drawing message, click No.

Trim an Entity

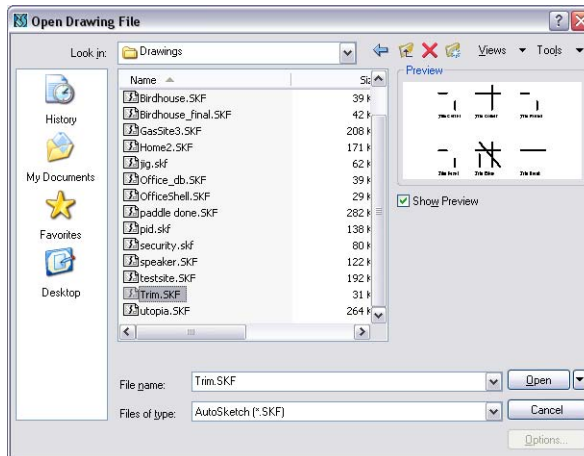
In this exercise, you learn to

- Shorten and lengthen an entity.
- Create rounded and beveled corners.
- Break apart and divide an entity.

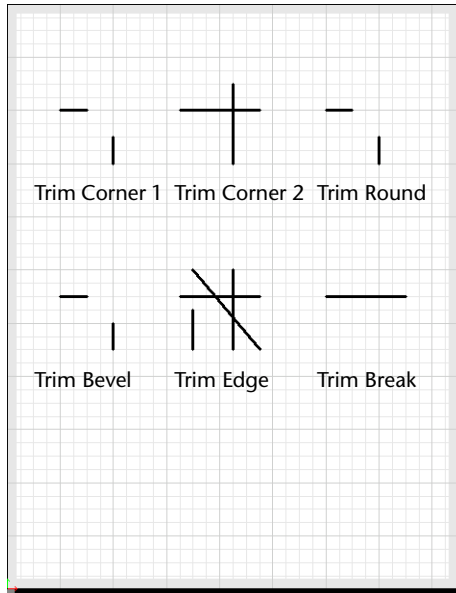
Trimming allows you to shorten and lengthen entities so they can meet at a specific point to create rounded and beveled corners, or to break apart and divide entities.

To trim an entity

- 1 In AutoSketch, on the File menu, click Open.



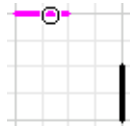
- 2 In the Open Drawing File dialog box, navigate to the following location:
C:\Program Files\Autodesk\AutoSketch10\Drawings
- 3 In the list of files, select *Trim.skf*, and then click Open.
The following drawing is opened in AutoSketch.



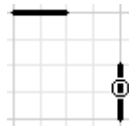
First, *join* two perpendicular lines to create an intersection.



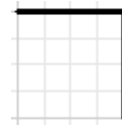
- 4 On the All-In-One toolbar, click Trim Corner.
- 5 In the Trim Corner 1 section of the drawing, click the horizontal line. Then, click the vertical line to the right of that horizontal line. Right-click to end the command.



first selection



second selection



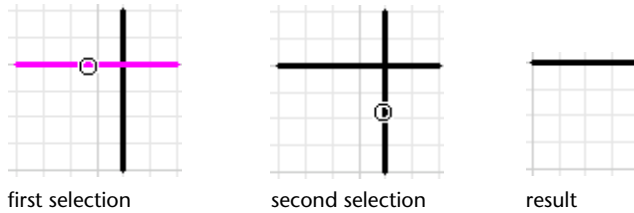
result

Example of two perpendicular lines joining to form a corner

Next, use the same Trim Corner button to *remove* excess lines and form a corner.



- 6 On the All-In-One toolbar, click Trim Corner.
- 7 In the Trim Corner 2 section of the drawing, click the left side of the horizontal line. Then, click the lower part of the vertical line. Right-click to end the command.



Example of two intersecting lines trimmed to form a corner

Now, create a rounded corner.

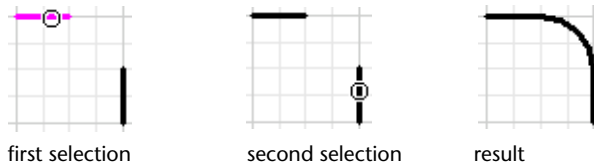
- 8 On the All-In-One toolbar, click and hold the Trim Corner button.



- 9 On the toolset, drag the pointer to select Trim Round.

- 10 In the drawing, locate Trim Round, in the upper-right section of the drawing.

- 11 In the Trim Round section of the drawing, click the horizontal line. Then, click the vertical line to the right of that horizontal line. Right-click to end the command.



Example of two perpendicular lines joining to form a rounded corner

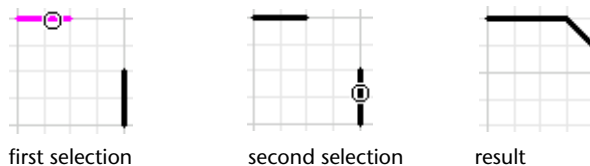
Next, create a beveled corner.

- 12 On the All-In-One toolbar, click and hold the Trim Round button.



- 13 On the toolset, drag the pointer to select Trim Bevel.

- 14 In the Trim Bevel section of the drawing, click the horizontal line. Then, click the vertical line to the right of that horizontal line. Right-click to end the command.



Example of two perpendicular lines joining to form a beveled corner

Next, join two divided lines and then trim the extraneous lines in an intersection.

15 On the All-In-One toolbar, click and hold the Trim Bevel button.

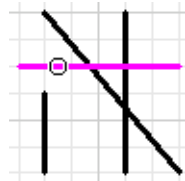


16 On the toolset, drag the pointer to select Trim Edge.

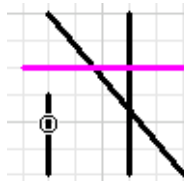
17 In the Trim Edge section of the drawing, do the following, in order:

- Click the left part of the horizontal line.
- Click the left vertical line.
- Click the right vertical line, just below the diagonal line.
- Click the diagonal line just to the right of the vertical line that you just selected.

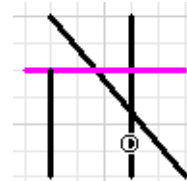
Your drawing should match the last picture in the following sequence of illustrations.



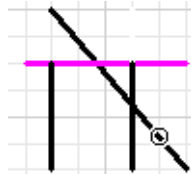
click horizontal line



click left vertical line



click right vertical line



click diagonal line



result

Example of two divided perpendicular lines joined and extraneous lines trimmed

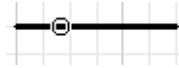
Next, create a break in a line.

18 On the All-In-One toolbar, click and hold the Trim Edge button.



19 On the toolset, drag the pointer to select Trim Break.

20 In the Trim Break section of the drawing, click anywhere on the horizontal line. Then, move the pointer to the center of the line, and click to create the break point. Right-click to end the command.



first selection



second selection



result

Example of a line broken into two equal sections

21 On the File menu, click Close.

22 In the Save Changes to Drawing message, click No.

Now that you understand how to create different kinds of entities using the Draw menu and the All-In-One toolbar, and how to trim entities, you can move on to more challenging exercises.