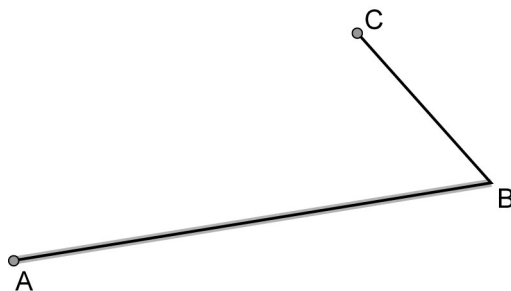Name: _____   Date: _____

Constructing Parallelograms

The process of creating a parallelogram can be very difficult. Follow the steps outlined below. Refer to **BLM T4** *The Geometer's Sketchpad*® **3** or **BLM T5** *The Geometer's Sketchpad*® **4** for basic operations.
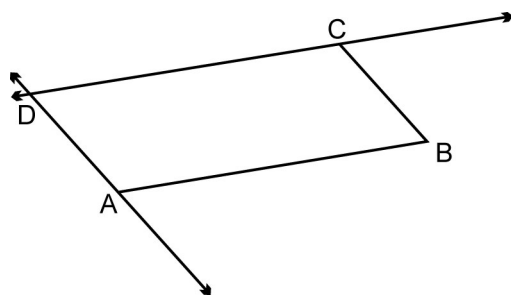
Method 1

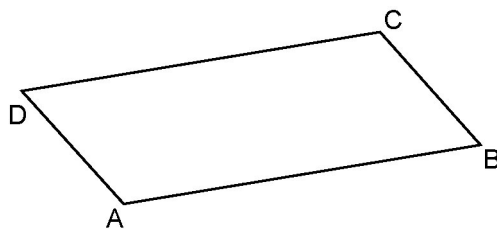**Using** *The Geometer's Sketchpad*®

Turn on automatic labelling of points. Start with a line segment, AB, in the centre of the screen. Construct line segment BC. Highlight point C and then line segment AB. On the **Construct** menu, click **Labelled Parallel Line**.

Repeat this step by highlighting point A and then line segment BC. Highlight the two parallel lines that were constructed. On the **Construct** menu, click **Intersection**. Point D should be the fourth point of the parallelogram.
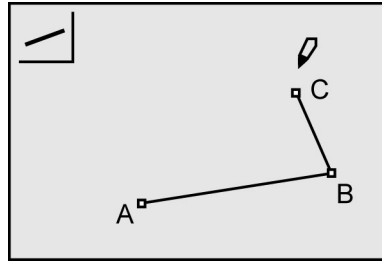
Highlight the two parallel lines that were created and select the **Hide Parallel Lines** feature from the **Display** menu, or press **CTRL** and **H** together. Construct line segments AD and CD. Drag points A, B, or C around the screen to test your construction.
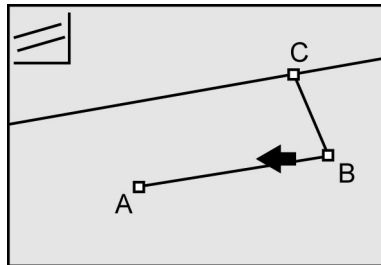
Method 2

Using *Cabri™ Jr.*

Press **APPS**, then *Cabri™ Jr*. Press **ENTER** when the title screen appears. If you need to clear a previous drawing from the screen, press **Y=** to display the **F1 File** menu, then select **NEW**.
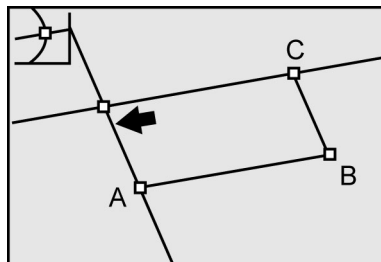
Construct line segments on the screen with a common vertex. Label the points as shown.

Press **F3** and select the option **Parallel**. Press **ENTER** on vertex C and then on line segment AB. A line will be drawn through C that is parallel to AB.

Repeat this for point A and line segment BC. Press **F2** and the option **Point**. Press the right arrow and select **Intersection**. Press **ENTER** on each of the parallel lines that you created.

Hide the parallel lines leaving the point of intersection. Label this point D. Connect A to D, and C to D. Test your construction by dragging any of points A, B, or C.