

# Construction of a Parallelogram

1. Construct line  $\overleftrightarrow{AB}$ .
2. Construct point C not on  $\overleftrightarrow{AB}$ . Construct line parallel to  $\overleftrightarrow{AB}$  through point C (select Parallel Line tool and click on point C then on  $\overleftrightarrow{AB}$ ). The parallel line should appear.
3. Construct a line through points A & C.
4. Construct a line parallel to  $\overleftrightarrow{AC}$  that passes through point B. (Select the Parallel Line tool and follow instructions from step 3.)
5. Use the Intersect Tool to find the point of intersection between  $\overleftrightarrow{AB}$  & the line from step 4. This should be point D.
6. Use the Segment Tool to construct segments for each side of the parallelogram  $\overline{AB}$ ,  $\overline{BD}$ ,  $\overline{DC}$  &  $\overline{CA}$ .
7. Hide the lines leaving only the segments behind.
8. You should now have a parallelogram ABDC (letter order may vary). Click and drag any vertex to confirm that the sides still stay parallel.
9. You can now use your measurement tools to verify the 4 properties of parallelograms.

