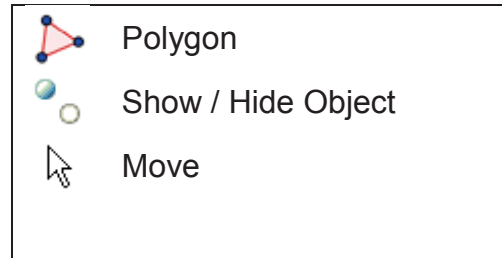
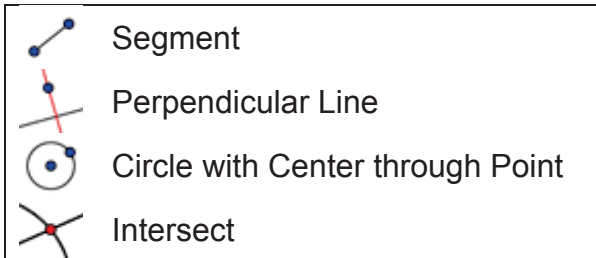




1. Square Construction

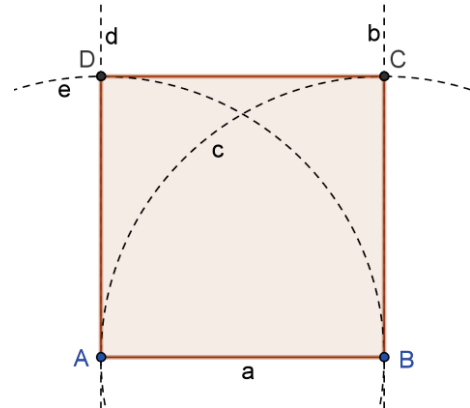
In this section you are going to use the following tools. Make sure you know how to use each tool before you begin with the actual construction of the square:



Hint: You might want to have a look at the link to the dynamic worksheet “Square Construction” <http://www.geogebraTube.org/student/m25910> if you are not sure about the construction steps.

Preparations

- Open a new GeoGebra window.
- Switch to *Perspectives* – *Geometry*.
- Change the labeling setting to *New Points Only* (menu *Options* – *Labeling*).



Construction Steps

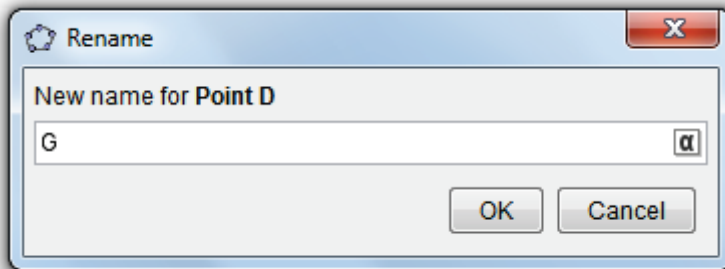
1		Draw the segment $a = AB$ between points A and B .
2		Construct a perpendicular line b to segment AB through point B .
3		Construct a circle c with center B through point A .
4		Intersect the perpendicular line b with the circle c to get the intersection points C and D .
5		Construct a perpendicular line d to segment AB through point A .
6		Construct a circle e with center A through point B .
7		Intersect the perpendicular line d with the circle e to get the intersection points E and F .
8		Create the polygon $ABCE$. <u>Hint:</u> Don't forget to close the polygon by clicking on point A after selecting point E .



9		Hide circles and perpendicular lines.
10		Perform the drag test to check if your construction is correct.
11		Enhance your construction using the <i>Stylebar</i> .

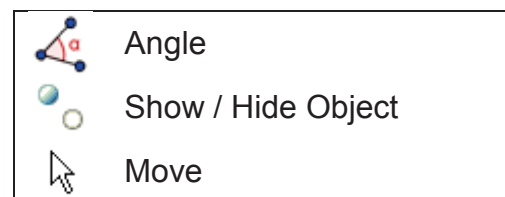
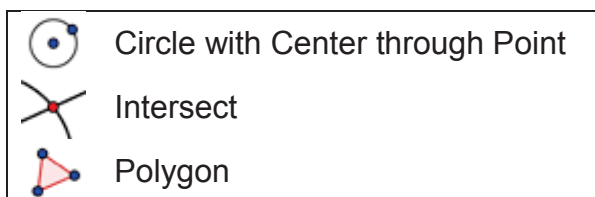
Challenge: Can you come up with a different way of constructing a square?

Hint: To rename an object quickly, click on it in *Move* mode and start typing the new name on the keyboard to open the *Rename* dialog.



2. Regular Hexagon Construction

In this section you are going to use the following tools. Make sure you know how to use each tool before you begin with the actual construction of the hexagon:



Hint: You might want to have a look at the link to the dynamic worksheet "Regular Hexagon Construction" <http://www.geogebraTube.org/student/m25912> if you are not sure about the construction steps.

Preparations

- Open a new GeoGebra window.
- Switch to *Perspectives* – *Geometry*.
- Change the labeling setting to *All New Objects* (menu *Options* – *Labeling*).

