The nephroid (from the Greek ὁ νεφρός ho nephros) is a plane curve whose name means 'kidney-shaped' (compare nephrology).

Launch Geogebra. https://www.geogebra.org/classic

- File → New → Save
- File → Save as → « *your_name*_nephroid »

- Draw a **Regular** 24-vertice **Polygon** ABCDEFGHIJKLMNOPQRSTUVWZ
- Draw **Segment** AM
- Draw **Segment** BZ and Place the **Point** A_1 at intersection of BZ and AM
- Draw **Segment** CW and Place the **Point** B_1 at intersection of CW and AM
- Draw **Segment** DV and Place the **Point** C_1 at intersection of DV and AM. And so forth until LN and AM.
- **Save** your figure

- Trace line AM
- Trace the **Circle with Center** B **through Point** A_1 and its symmetrical with respect to axis AM
- Trace the **Circle with Center** C **through Point** B_1 and its symmetrical with respect to axis AM
- Trace the **Circle with Center** D **through Point** C_1 and its symmetrical with respect to axis AM.
- And so forth until center L.
- **Save** your figure

- Render invisible all structure elements of nephroid
- File → Export → Graphics View as Picture (png) → Save « *your_name*_nephroid_pict »
- Open **Gimp** or **Paint3D** and color your nephroid.