

Good morning: no warm up, we will randomize when the bell rings and learn about polygons and quadrilaterals

**You will need a device
and a compass today**

FYI: next assessment is Monday
no DS for retakes this Friday

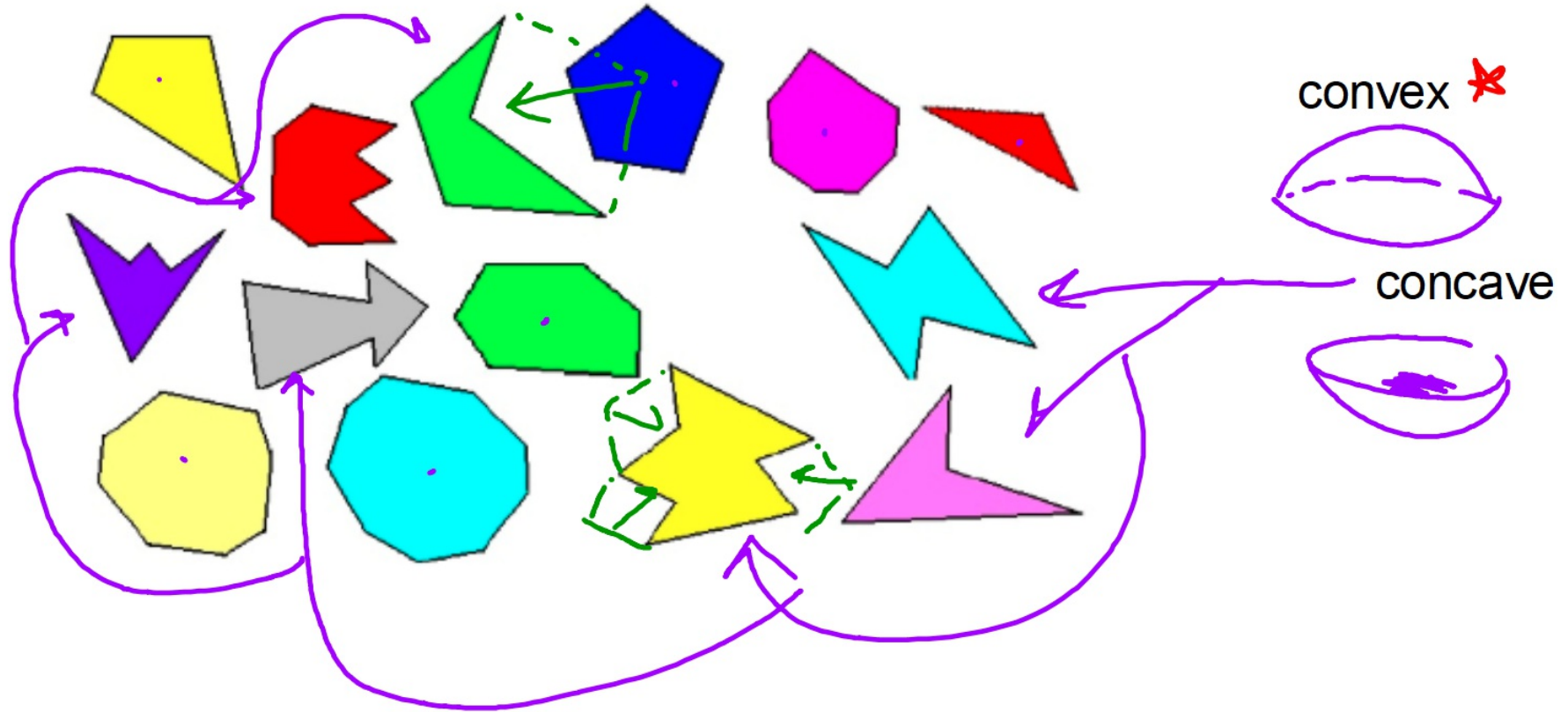
Interested in learning about engineering?
Come to DS on Friday!



Meet with representatives of UTC's College of Engineering and learn how the eLab can help prepare you for a career using math.

visibly random grouping

Polygons
many sides

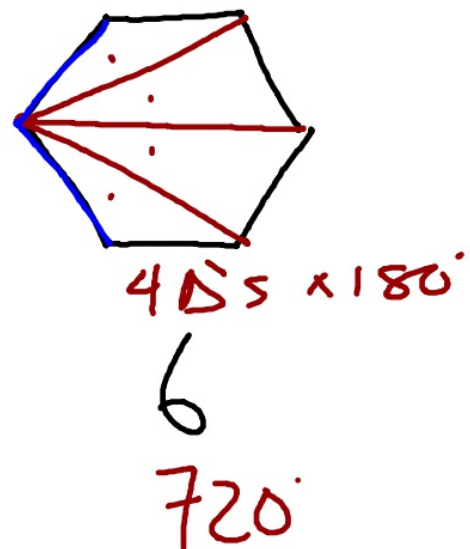
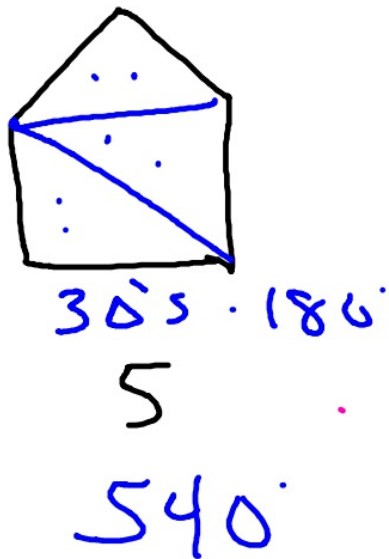
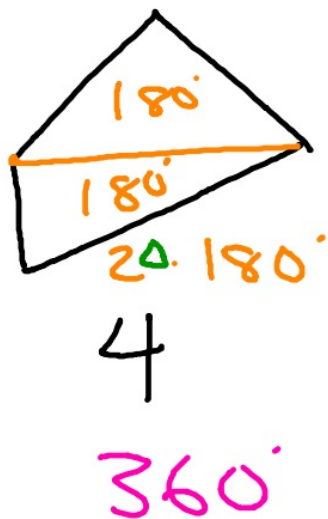
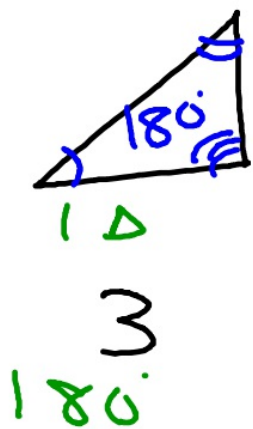


Regular Polygons

- \cong sides

- \cong angles

Polygon Angle Sum Formula

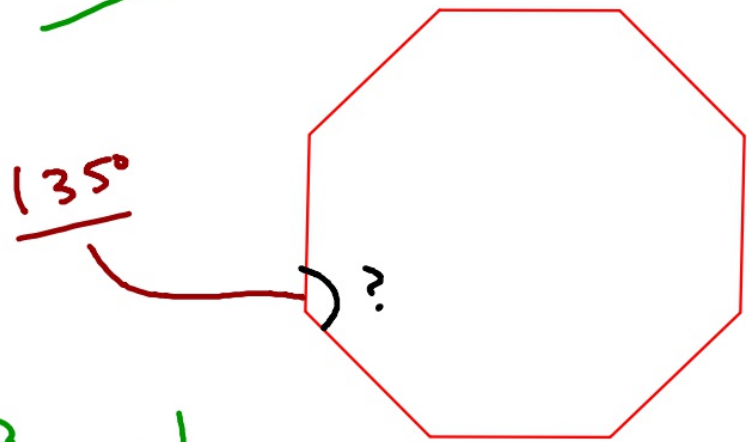


... 10 Δ · 180
12 = 1800°

n-gon # of degrees
(n-2) · 180°
 # of Δ's

Regular n

Regular Octagon



8 sides

$\Rightarrow 6 \Delta's \rightarrow 6 \cdot 180^\circ = 1080^\circ$ total

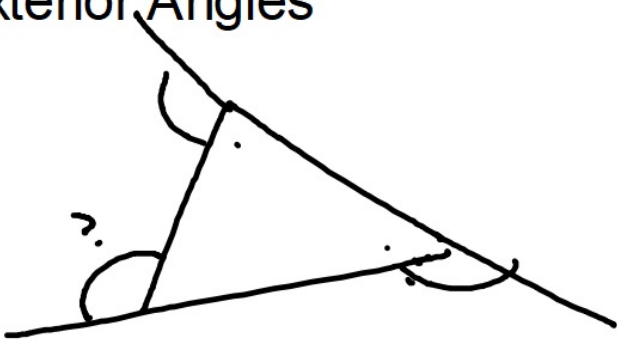
$$\begin{array}{r} \div 8 \approx \angle's \\ \hline \textcircled{135^\circ} \\ \underline{\quad} \end{array}$$

Nonagon (9-gon)

140 each

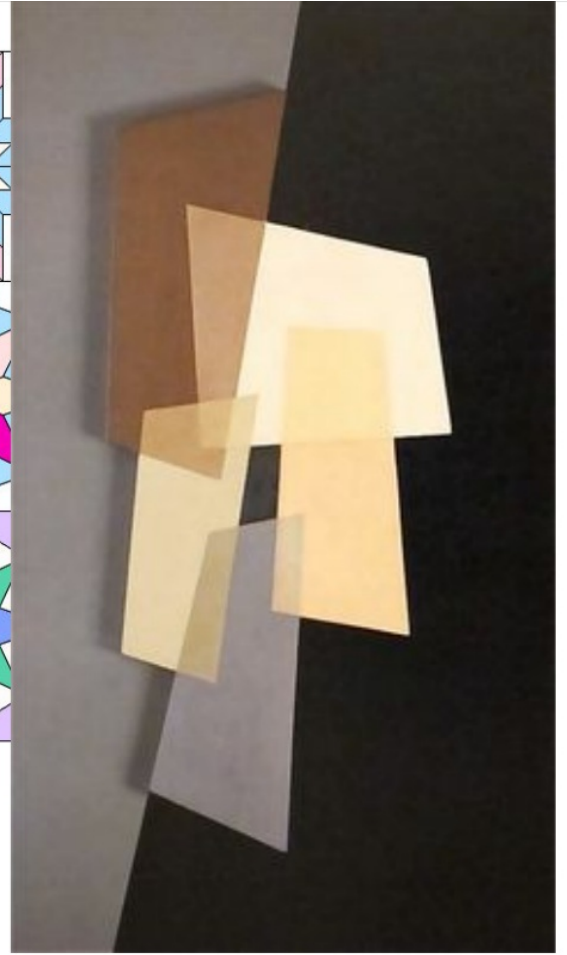
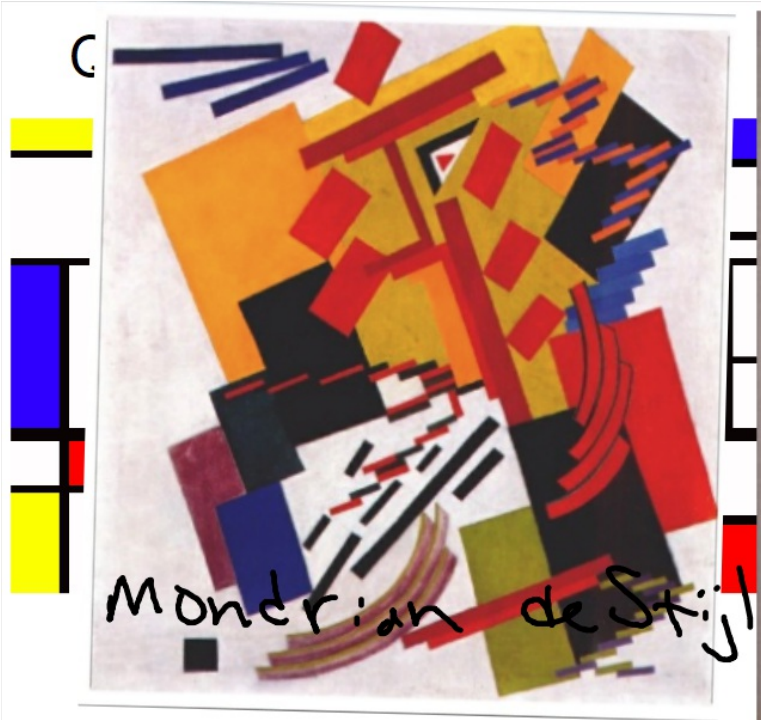
Find the measure of each vertex angle in a regular decagon (9 sides)

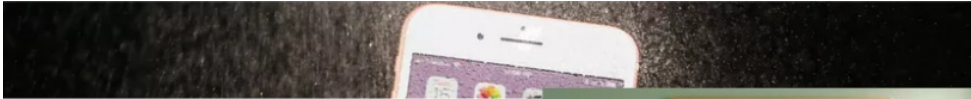
Exterior Angles



<https://www.geogebra.org/m/dMQ4rNf3>

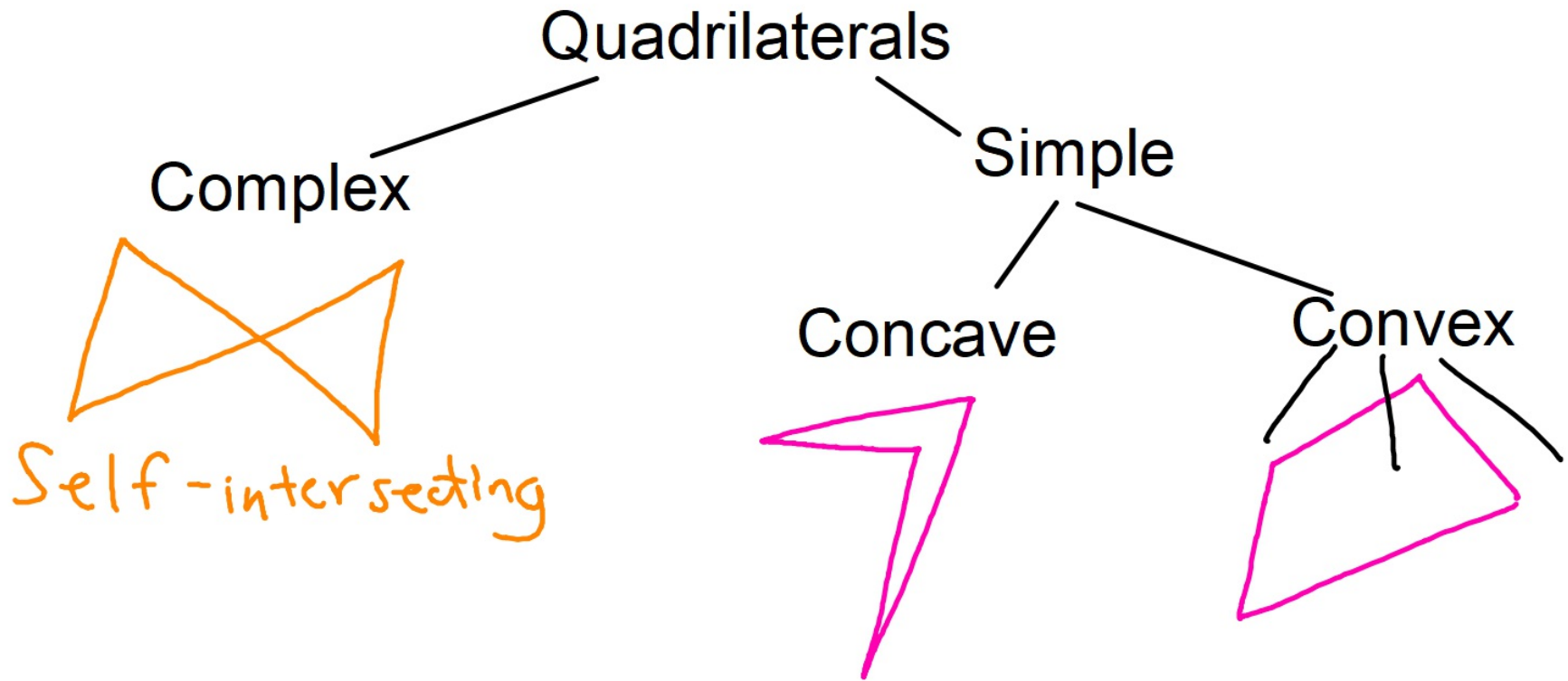
<https://www.geogebra.org/m/mKzJcf5p>



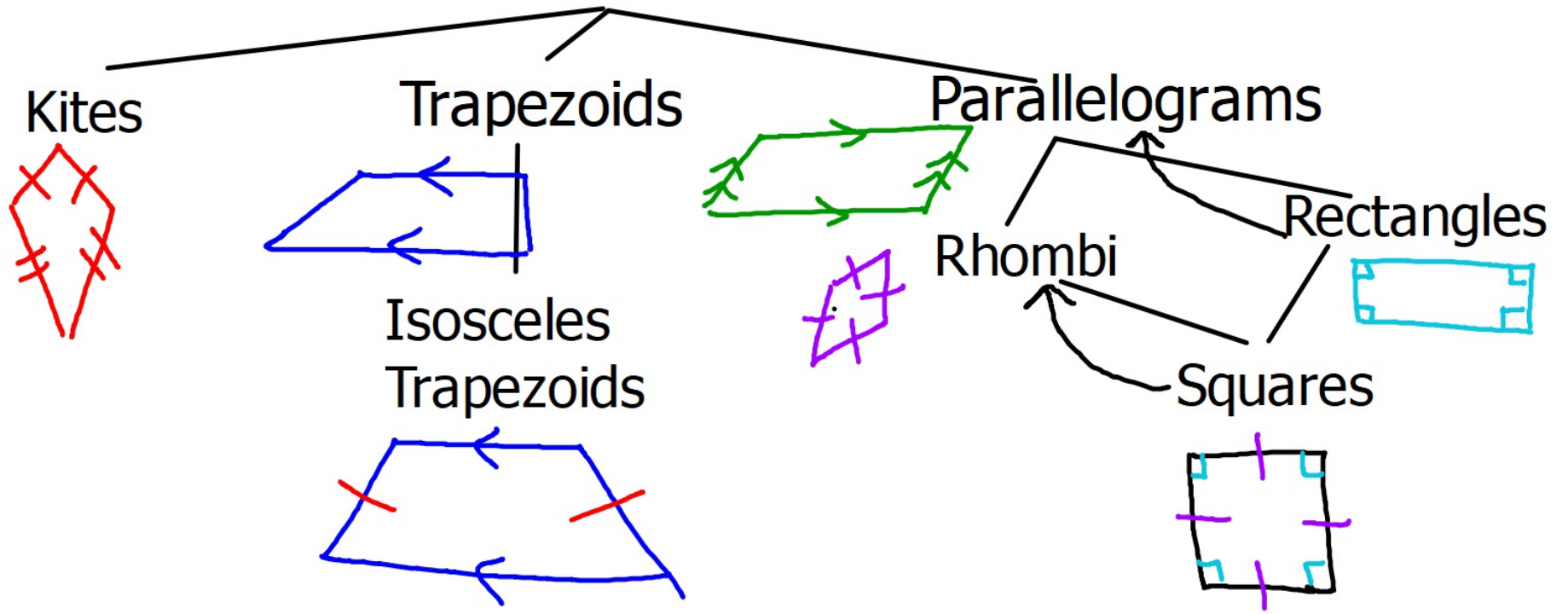




Taxonomy



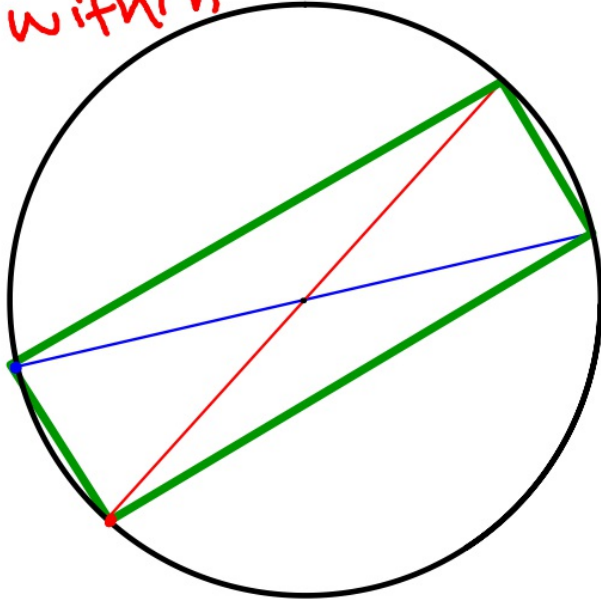
Convex Quadrilaterals



Practice



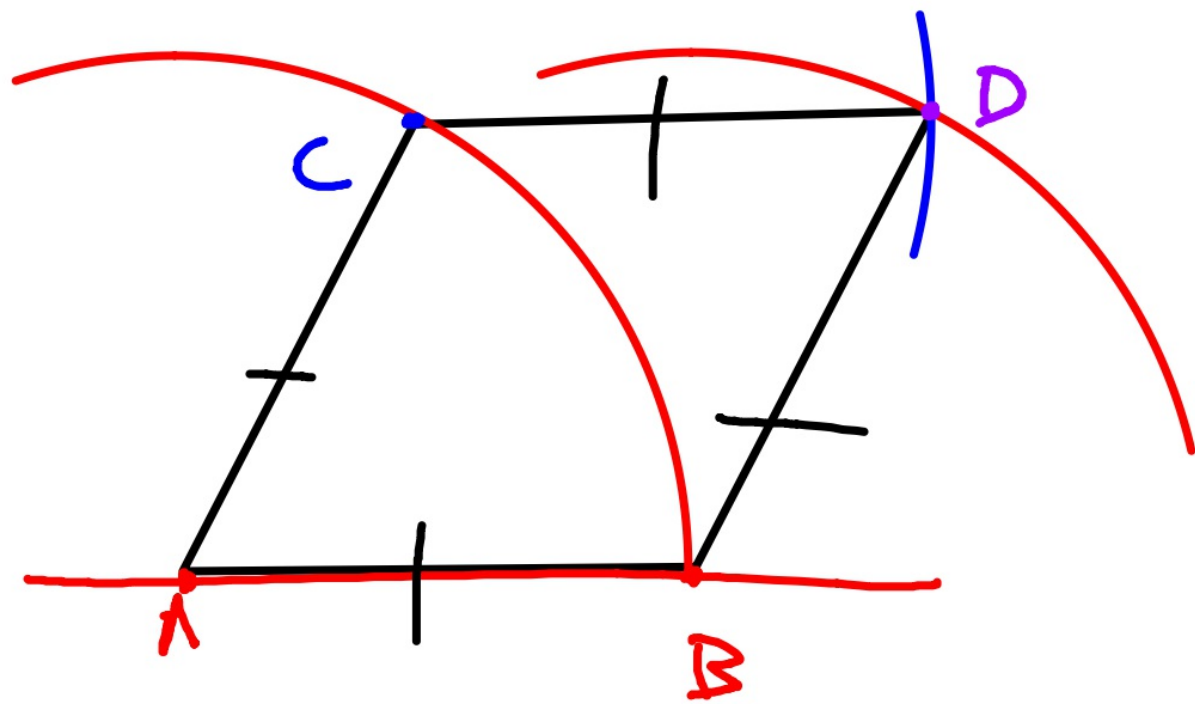
Constructing
a Rectangle
Inscribed in a Circle
drawn within



Circumscribed
drawn
around

Constructing a Square Inscribed in a Circle

<https://www.mathopenref.com/constinsquare.html>



HW:

watch and take notes on tonight's NEW video