

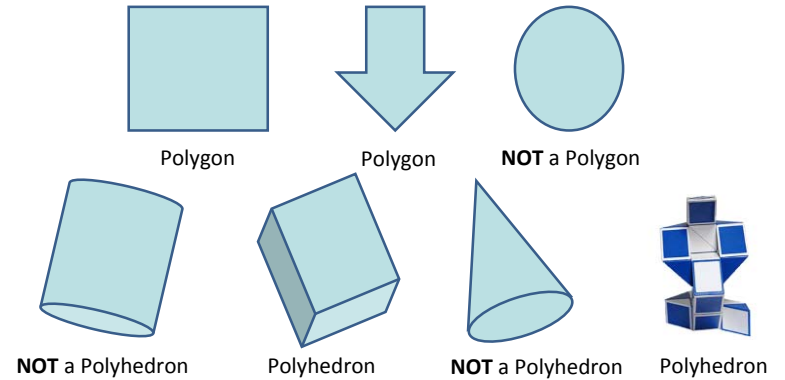
# Platonic Solids

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# A Lesson of Greek

- **Poly**: Greek *πολύς* (polus) = “many”
- **Gon**: Greek *γωνία* (gōnia) = “angle”
- **Hedron**: Greek *ἕδρα* (hedra) = “face”

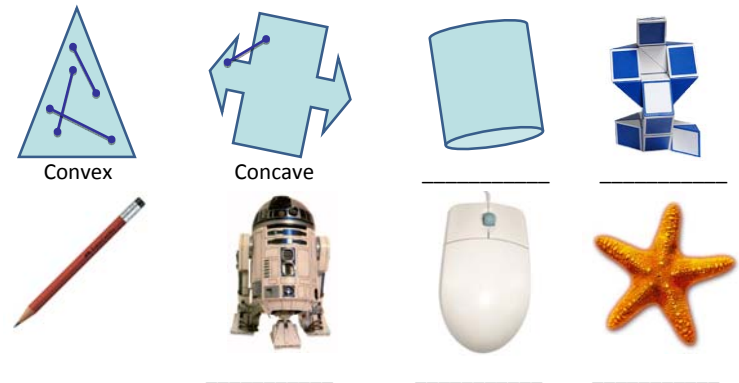


# A Lesson of Greek (cont.)

- |                 |                      |
|-----------------|----------------------|
| 2 <b>di-</b>    | 11 <b>hendeca-</b>   |
| 3 <b>tri-</b>   | 12 <b>dodeca-</b>    |
| 4 <b>tetra-</b> | 13 <b>trideca-</b>   |
| 5 <b>penta-</b> | 14 <b>tetradeca-</b> |
| 6 <b>hexa-</b>  | 15 <b>pentadeca-</b> |
| 7 <b>hepta-</b> | 20 <b>icosa-</b>     |
| 8 <b>octa-</b>  | 100 <b>hecto-</b>    |
| 9 <b>ennea-</b> | 1000 <b>kilo-</b>    |
| 10 <b>deca-</b> | 10000 <b>myria-</b>  |

# ...and a Lesson of Latin

- **Convex**: Latin *convexus* = “arched”
  - A figure or a solid is **convex** if **any** segment whose endpoints are inside the figure/solid lies **entirely** in the figure/solid
- **Concave** = non-convex

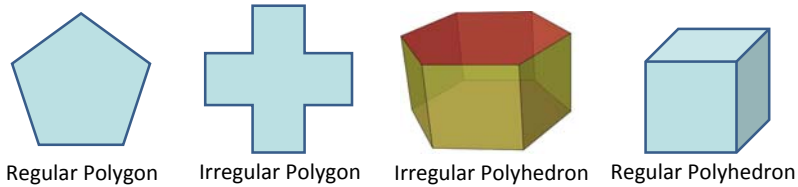


# ...a Lesson of Latin (cont.)

- **Congruent:** Latin *congruere* = “to meet together”, “agree”
  - Same size, same shape



- **Regular:** Latin *regula* = “rule”
  - Polygons: congruent angles + congruent sides
  - Polyhedra: congruent regular faces + equal number of faces meet at each vertex

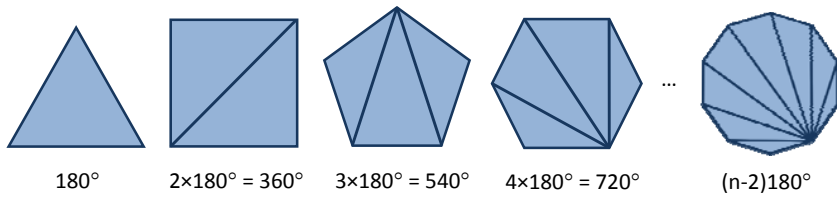


# Convex) Regular Polygons

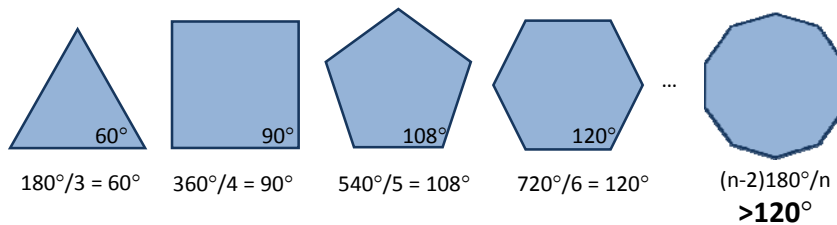
henagon	digon	triangle	square	pentagon
hexagon	heptagon	octagon	enneagon	decagon
hendecagon	dodecagon	tridecagon	tetradecagon	pentadecagon

# Angle measures of convex polygons

Sum of angle measures:



Individual Angle Measures (for regular polygons):



# Convex Regular Polyhedra, a.k.a. Platonic Solids

