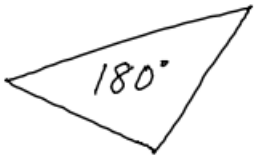
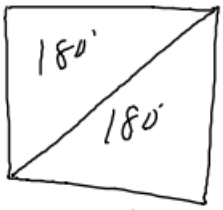
★ How many Degrees are in a 1000-sided shape? ★

3



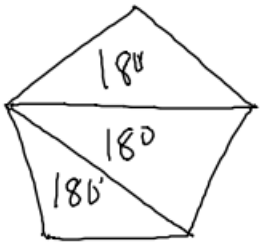
4 - sides



360°

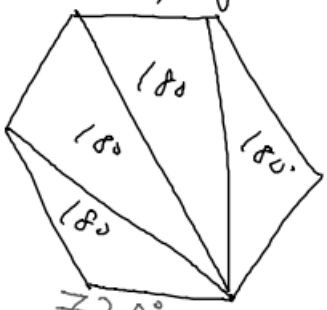
998
× 180

5 - pentagon



540

6 - hexagon

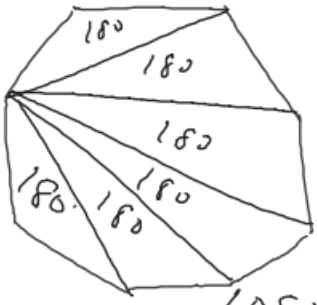


720°

4 - triangle

2 - triangles.

8 - Octagon



1080°

6 - triangles

3 - triangles

FORMULA

polygon angle sum.

In a shape with n-sides, the sum of the interior angles is

$$\underbrace{(n-2)}_{\#\text{ of }\triangle}\cdot\underbrace{180}_{\text{per }\triangle}$$ degrees.

ex/ Dodecagon (12-sides)

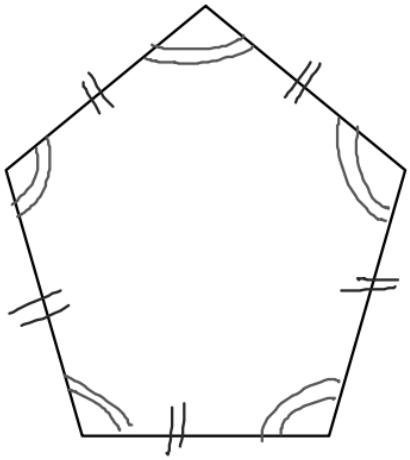
How many degrees?

$(12-2)\cdot 180$

$(10)(180) = \boxed{1800^\circ}$

Regular vs. Irregular

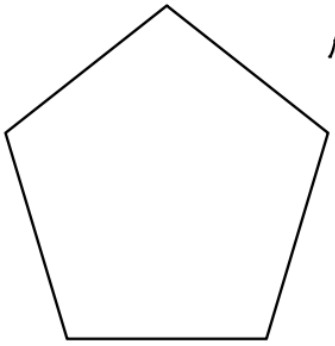
pentagon
irregular



pentagon
Regular

Regular → all angles ≅
→ all sides ≅

Q+/



How many degrees is each angle?

$\frac{\text{total}}{5}$ $(5-2)\cdot 180 = 540°$ total

$\frac{540°}{5}$

108°

Concave vs. Convex

convex pentagon

Concave pentagon

Concave: one or more angles are more than 180°.

Convex: all angles are less than 180°.
(typical shapes.)