

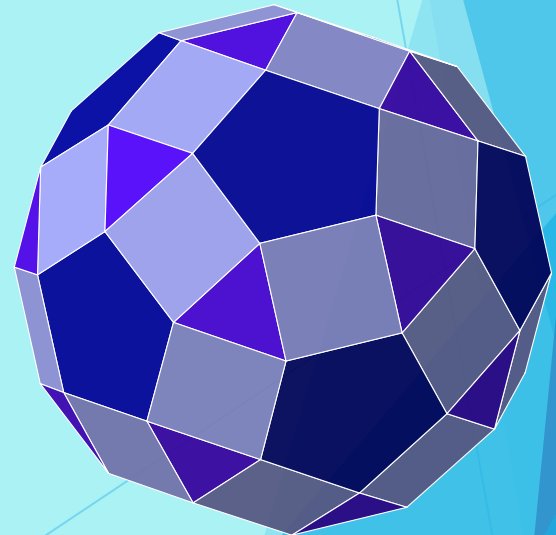
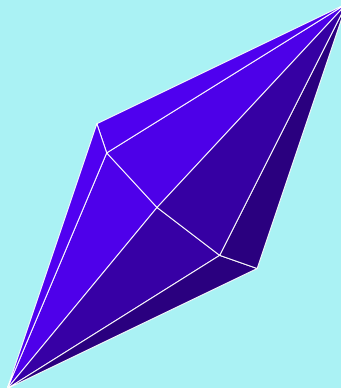
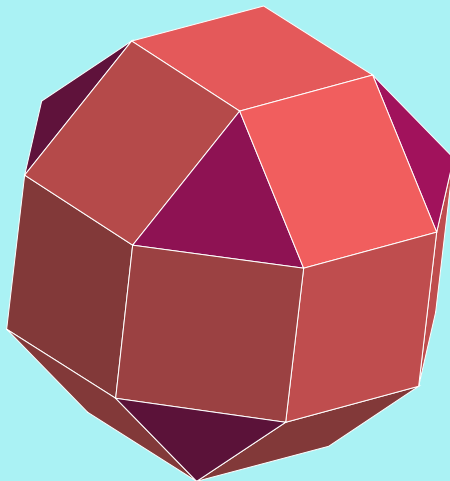
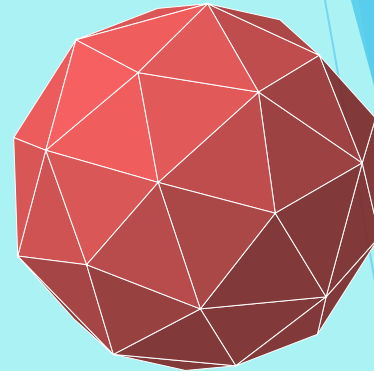
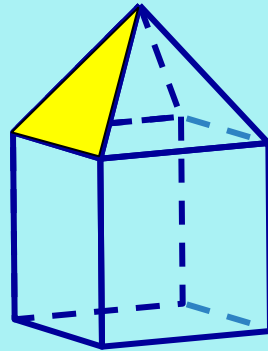
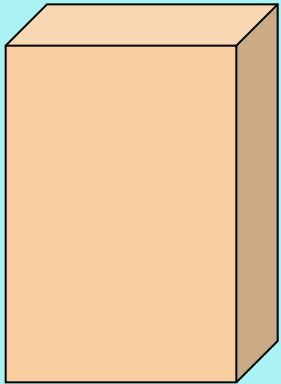


POLIEDROS

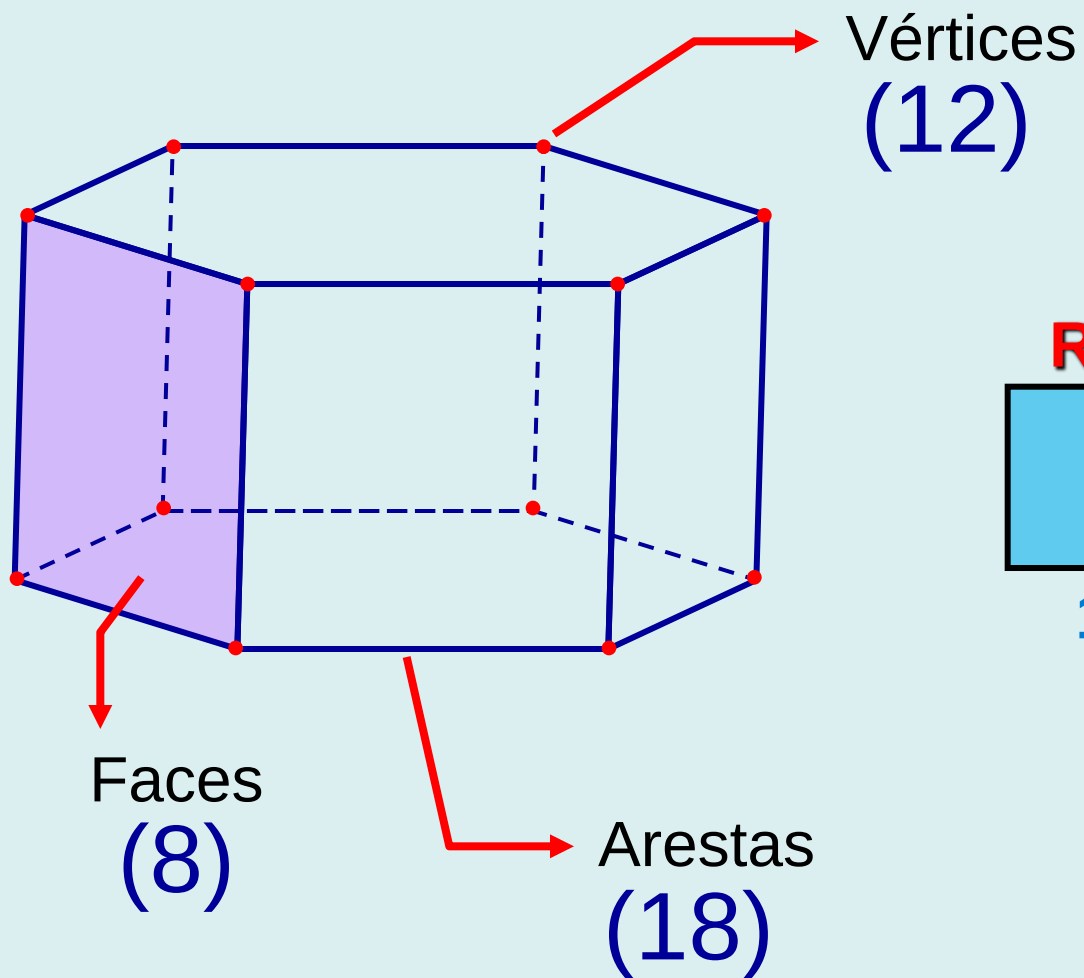
Profº Carlos

POLIEDROS

Sólidos geométricos limitados por polígonos.



Elementos do Poliedro



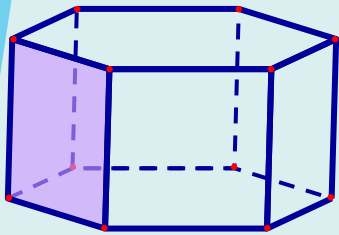
Relação de Euler

$$V + F = A + 2$$

$$12 + 8 = 18 + 2$$

$$20 = 20$$

Elementos do Poliedro



Qual a quantidade de vértices, arestas e faces de um poliedro limitado por seis faces quadrangulares e duas faces hexagonais?

$$\begin{array}{r} 6F_4 \\ + \quad 2F_6 \\ \hline F = 8 \end{array}$$

$$A = \frac{6(4) + 2(6)}{2}$$

$$A = \frac{24 + 12}{2}$$

$$A = 18$$

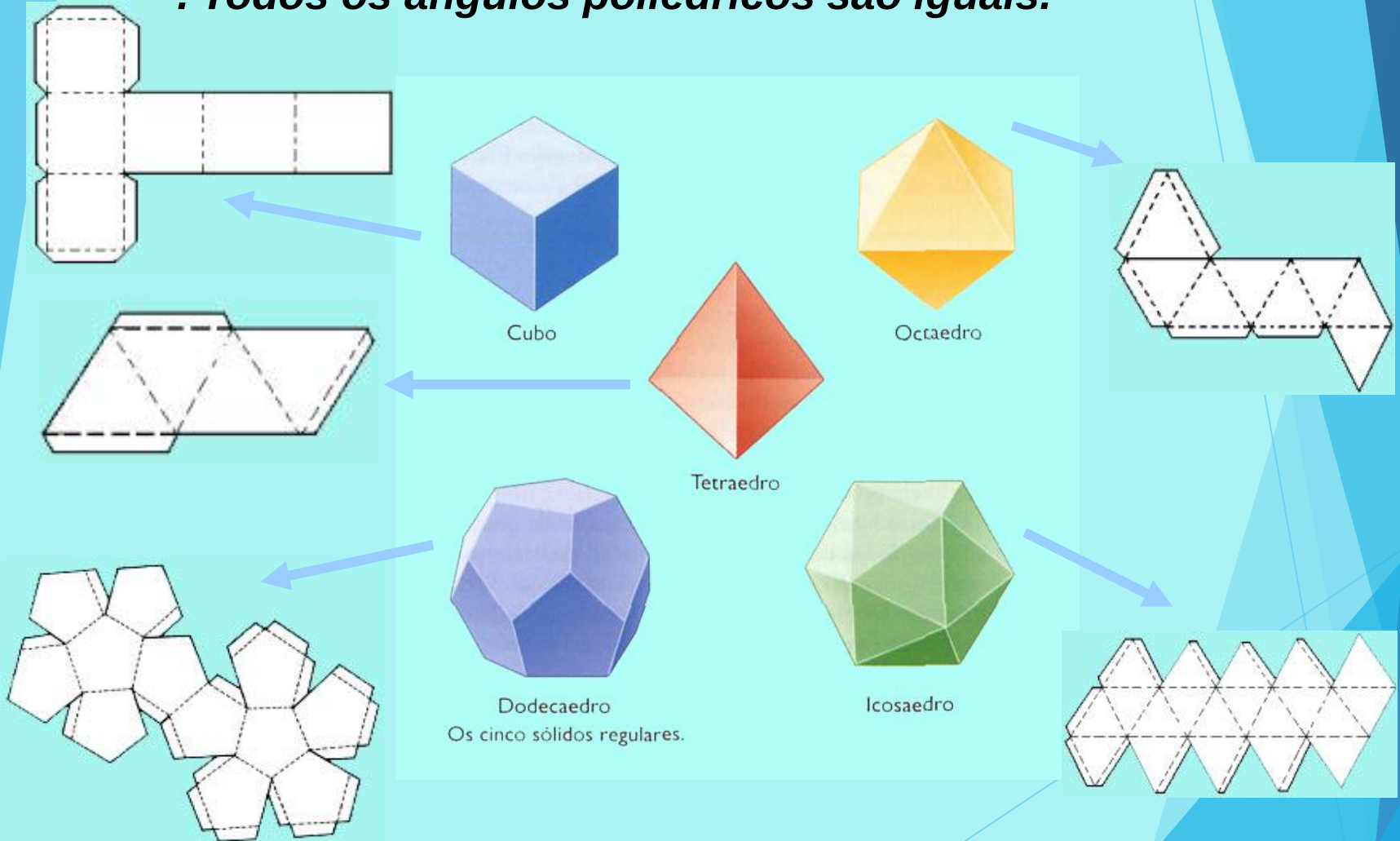
$$V + F = A + 2$$

$$V + 8 = 18 + 2$$

$$V = 12$$

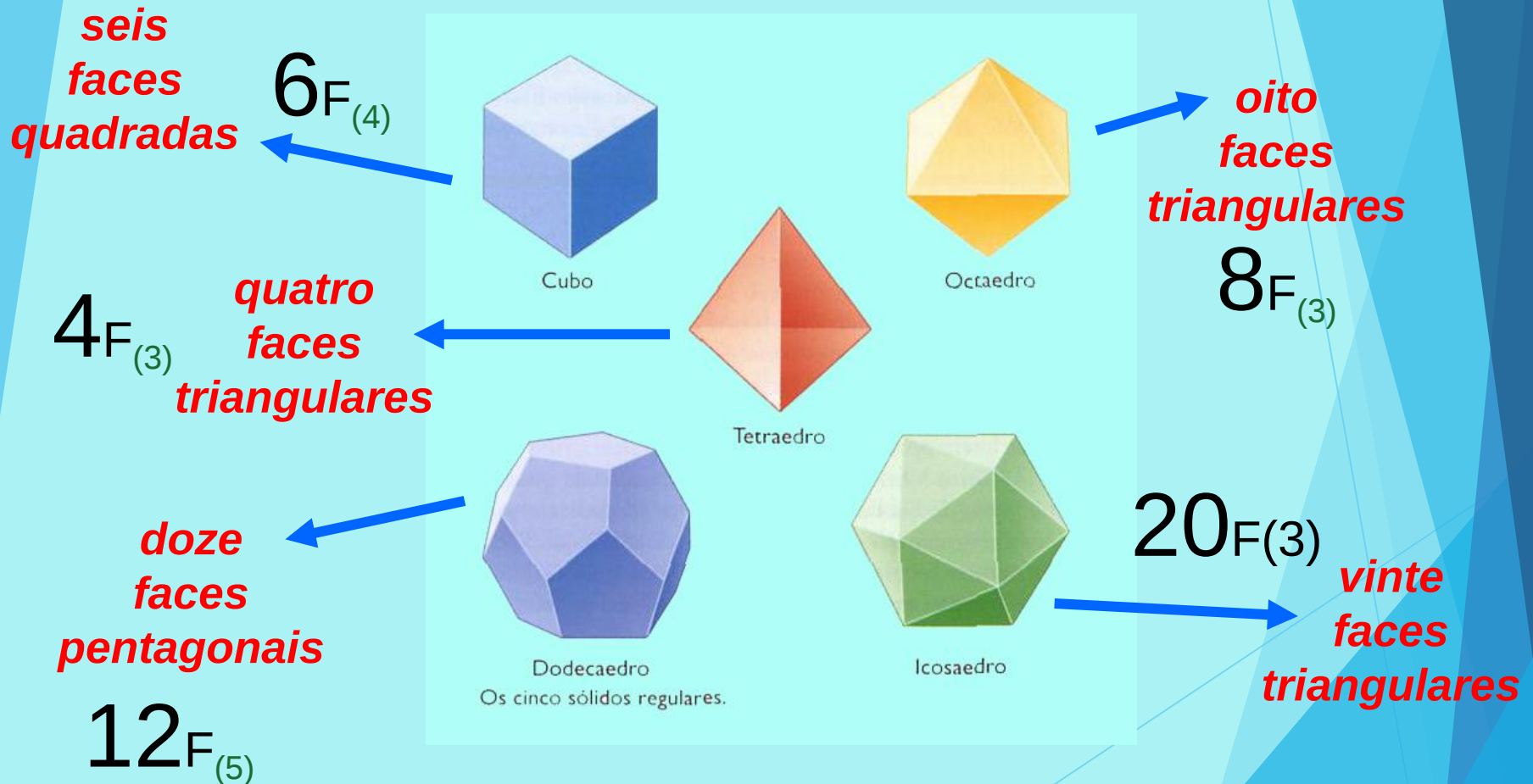
Poliedros Regulares

- . Todas as faces são polígonos regulares iguais;***
- . Todos os ângulos poliédricos são iguais.***



Poliedros Regulares

- . Todas as faces são polígonos regulares iguais;
- . Todos os ângulos poliédricos são iguais.



Poliedros Regulares

Como calcular todas faces, arestas e vértices dos poliedros regulares?

$$V + F = A + 2$$

 Tetraedro	TETRA $4_{F(3)}$	4	4	6	2
 Cubo	HEXA $6_{F(4)}$	8	6	12	2
 Octaedro	OCTA $8_{F(3)}$	6	8	12	2
 Dodecaedro Os cinco solidos regulares	DODE $12_{F(5)}$	20	12	30	2
 Icosaedro	ICOSA $20_{F(3)}$	12	20	30	2