
PARTICIONES DE POLIEDROS

D.I. Patricia Muñoz

D.I. Juan Pablo López Coronel

Laboratorio de Morfología
SICyT - FADU - UBA

Cátedra de Morfología Especial 1 y 2
Carrera de Diseño Industrial
FADU - UBA

Introducción:

Los poliedros permiten realizar particiones regulares y semiregulares que resultan de gran interés por las oposiciones espaciales que evidencian.

Denominamos **particiones regulares** a aquellas que definen dos o más partes iguales entre si (sin considerar la posición en la que están ubicadas una respecto a la otra).

Estas particiones son de gran interés en la instancia de concretar estas formas, de darles materialidad. La regularidad que presentan las partes permiten generar sistemas constructivos con módulos que reconstruyan tanto al poliedro de origen como a nuevas formas a partir de distintos reagrupamientos de los módulos.

El diseño de las uniones es la clave que define cuáles serán las organizaciones posibles dentro del sistema.

Existen otras particiones que denominaremos **semiregulares**.

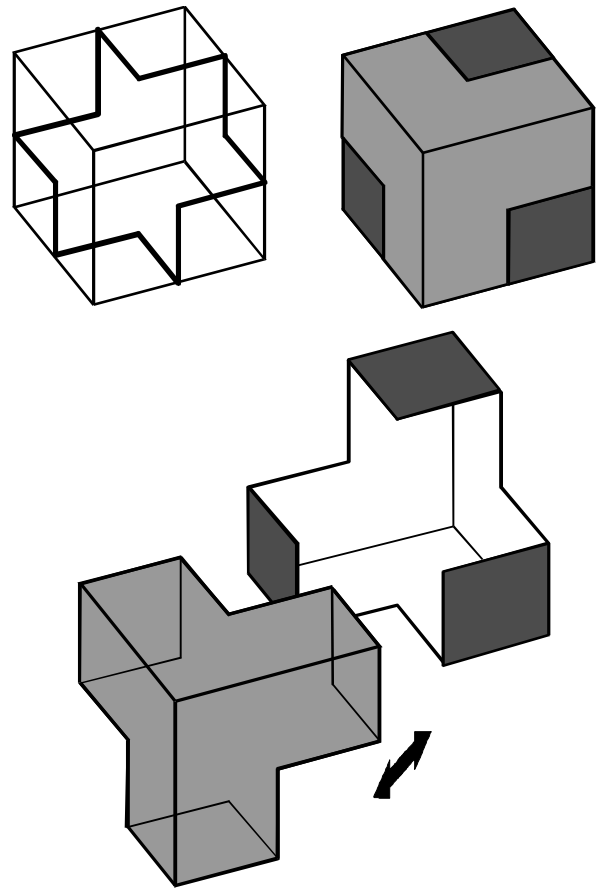
Son aquellas que determinan dos o más partes con la condición que al menos una de ellas se repita.

Estas particiones inducen la generación de distintos roles en los componentes del sistema (diferenciación de piezas componentes y piezas de unión).

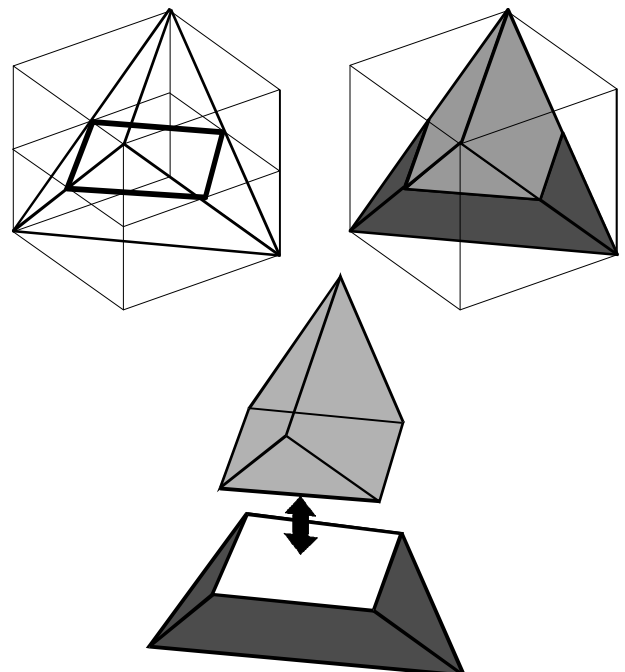
El análisis de las particiones que presentamos, en algunos poliedros, se ordenan de acuerdo a los siguientes parámetros:

1. número de piezas distintas emergentes de la partición y su cantidad,
2. cantidad de caras distintas,
3. cantidad de aristas distintas en su longitud.

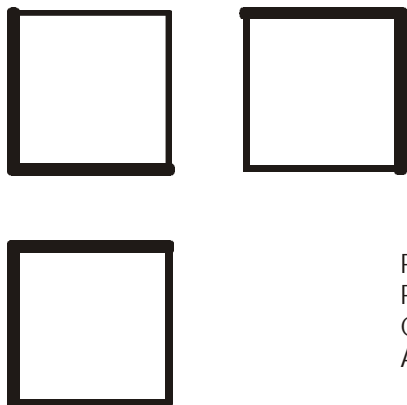
Estas particiones no pretenden agotar todas las opciones posibles. Tan sólo brindan una lectura distinta de los poliedros, basada en su regularidad y sus oposiciones espaciales.



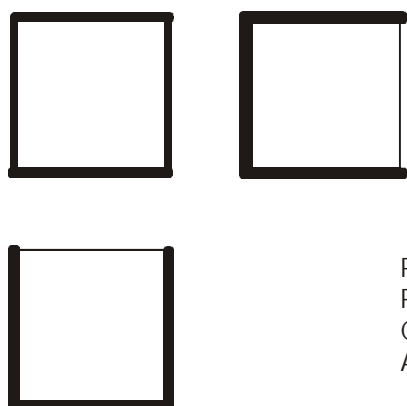
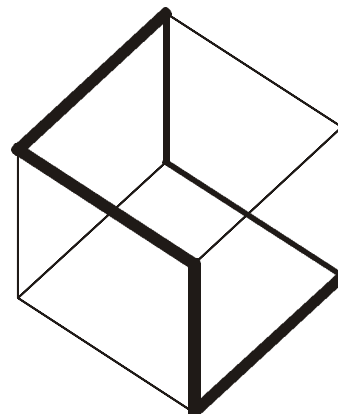
Cantidad de partes distintas	1 x 2 (una que se repite dos veces)
Cantidad de caras distintas	2
Cantidad de aristas distintas	2



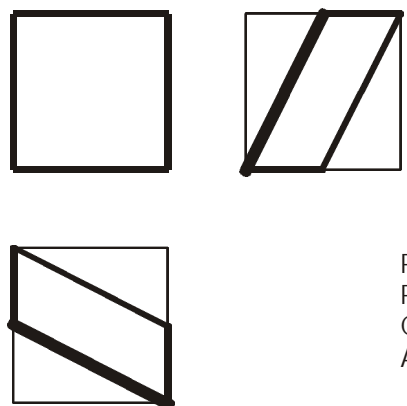
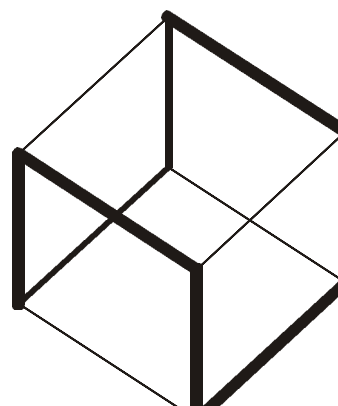
Cantidad de partes distintas	1 x 2 (una que se repite dos veces)
Cantidad de caras distintas	2
Cantidad de aristas distintas	3



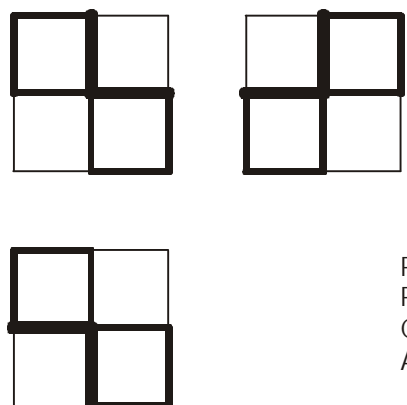
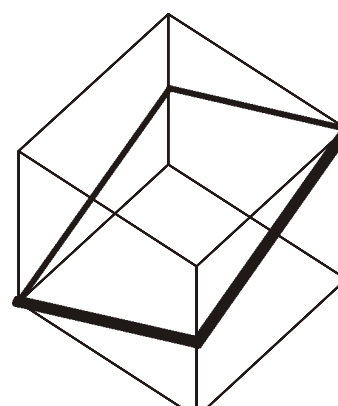
Partición regular
 Partes distintas: 1x 2
 Caras distintas: 1
 Aristas distintas: 1



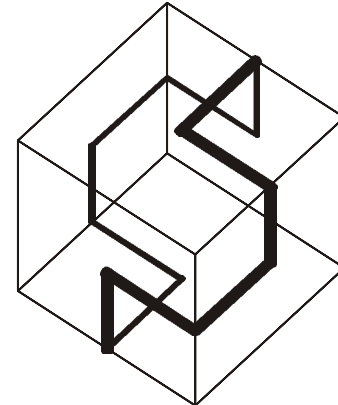
Partición regular
 Partes distintas: 1x 2
 Caras distintas: 1
 Aristas distintas: 1

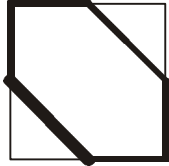
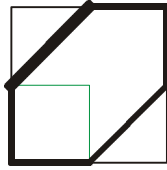
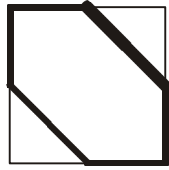


Partición regular
 Partes distintas: 1x 2
 Caras distintas: 3
 Aristas distintas: 3

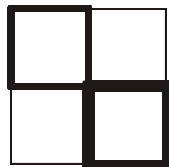
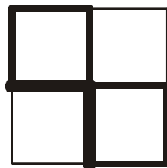
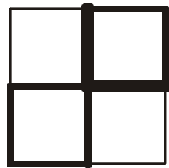
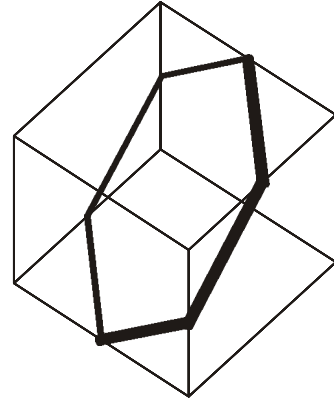


Partición regular
 Partes distintas: 1x 2
 Caras distintas: 2
 Aristas distintas: 2

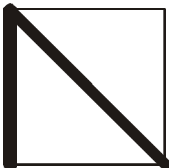
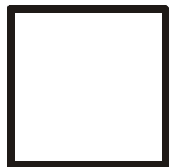
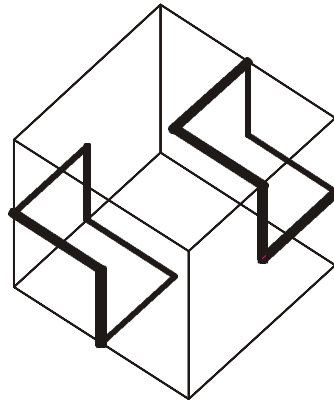




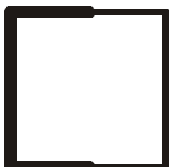
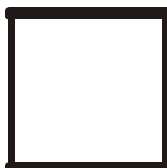
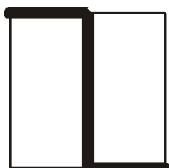
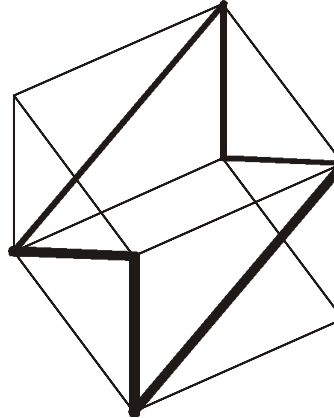
Partición regular
Partes distintas: 1x2
Caras distintas: 2
Aristas distintas: 3



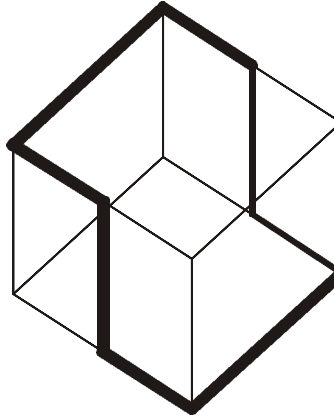
Partición semiregular
Partes distintas: 1x2 / 1

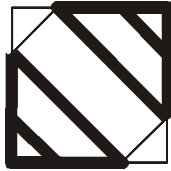
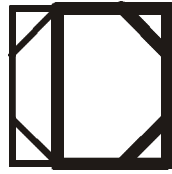
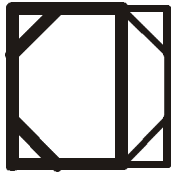


Partición regular
Partes distintas: 1x2
Caras distintas: 2
Aristas distintas: 2

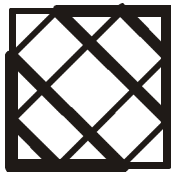
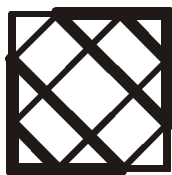
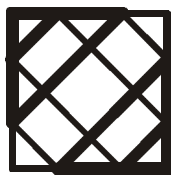
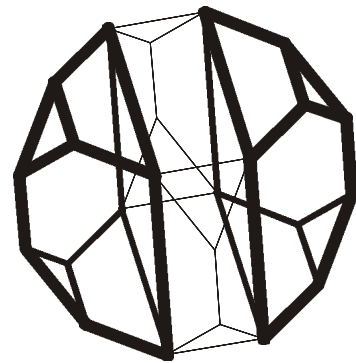


Partición regular
Partes distintas: 1x2
Caras distintas: 2
Aristas distintas: 2

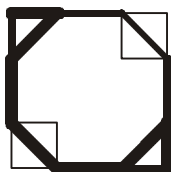
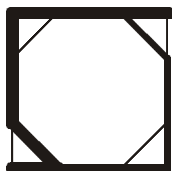
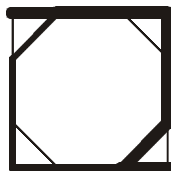
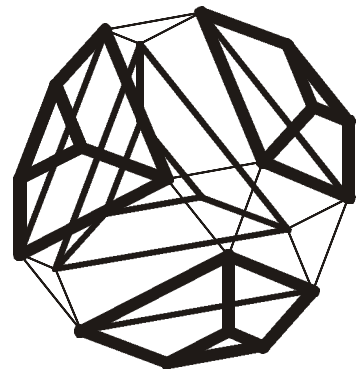




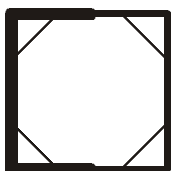
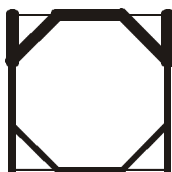
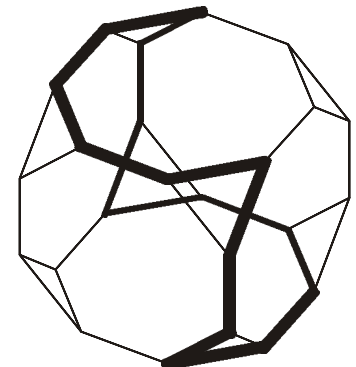
Partición
semiregular
Partes distintas: 1x2
/ 1



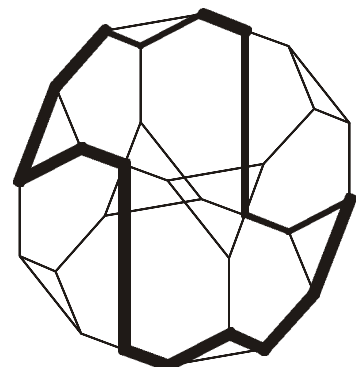
Partición
semiregular
Partes distintas: 1x4
/ 1

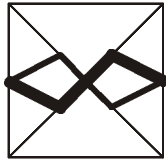
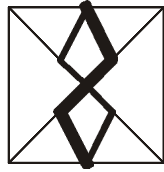
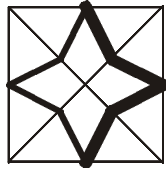


Partición regular
Partes distintas: 1x2
Caras distintas: 2
Aristas distintas: 1

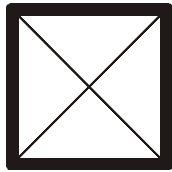
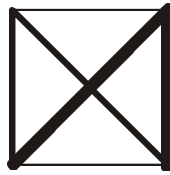
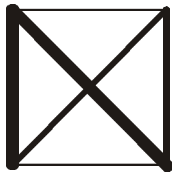
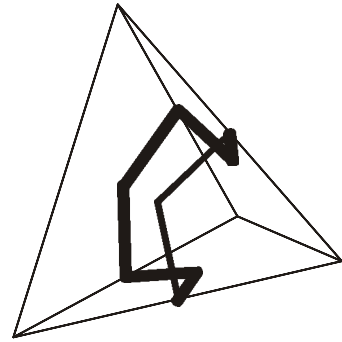


Partición regular
Partes distintas: 1x2
Caras distintas: 3
Aristas distintas: 3

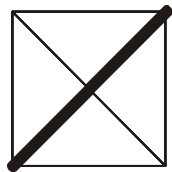
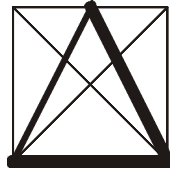
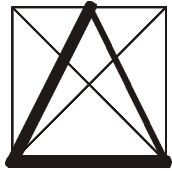
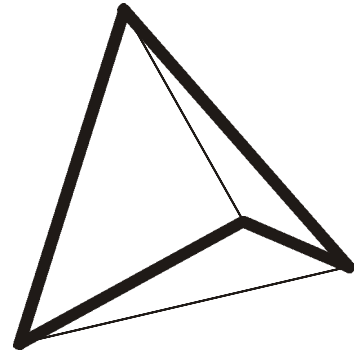




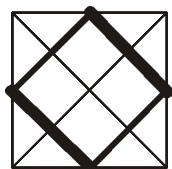
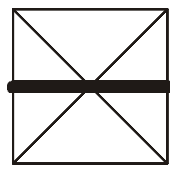
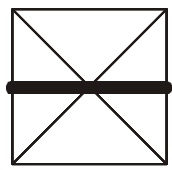
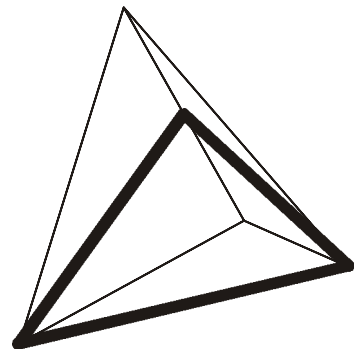
Partición regular
 Partes distintas: 1x 2
 Caras distintas: 2
 Aristas distintas: 2



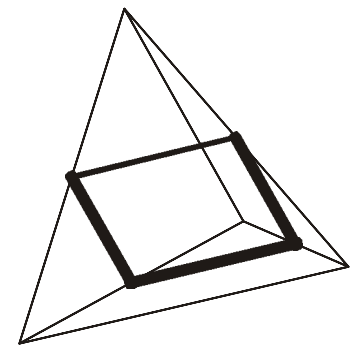
Partición regular
 Partes distintas: 1x 2
 Caras distintas: 1
 Aristas distintas: 1

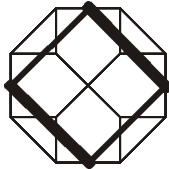
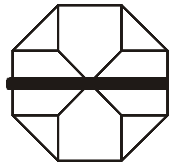
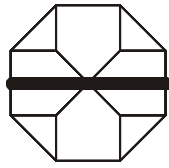


Partición regular
 Partes distintas: 1x 2
 Caras distintas: 2
 Aristas distintas: 3

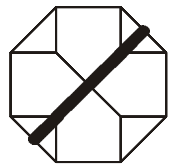
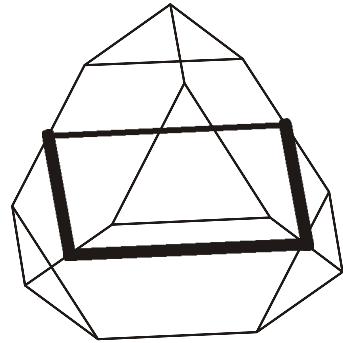


Partición regular
 Partes distintas: 1x2
 Caras distintas: 2
 Aristas distintas: 3

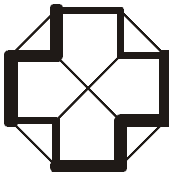
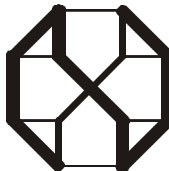
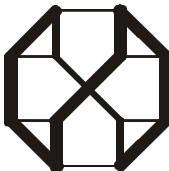
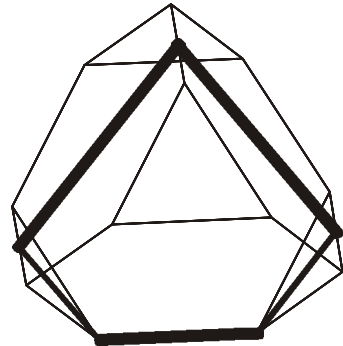




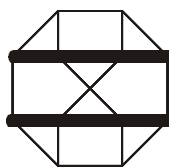
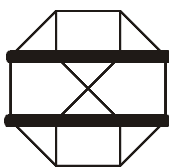
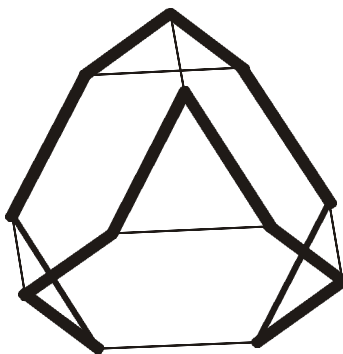
Partición regular
 Partes distintas: 1x 2
 Caras distintas: 3
 Aristas distintas: 3



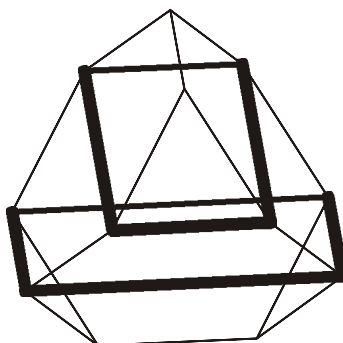
Partición regular
 Partes distintas: 1x 2
 Caras distintas: 3
 Aristas distintas: 4

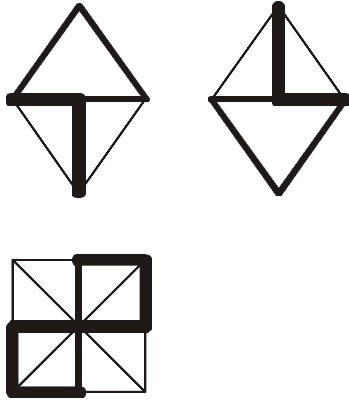


Partición regular
 Partes distintas: 1x 2
 Caras distintas: 2
 Aristas distintas: 1

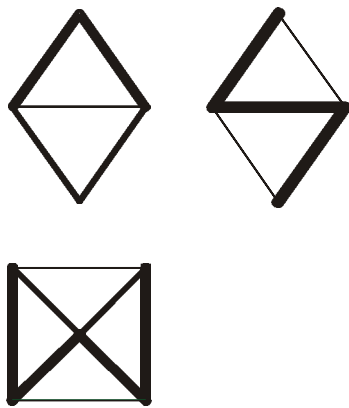
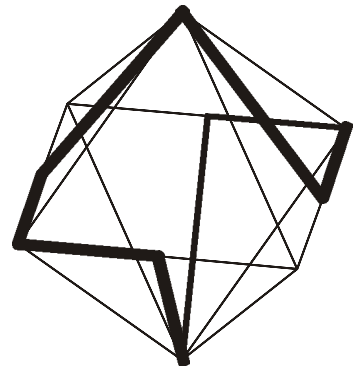


Partición semiregular
 Partes distintas: 1x2 / 1

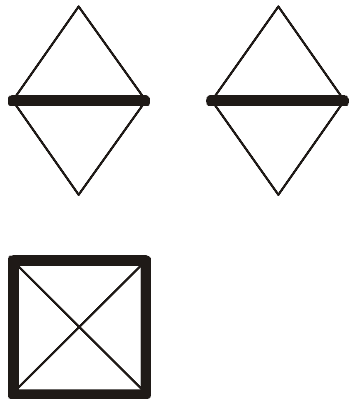
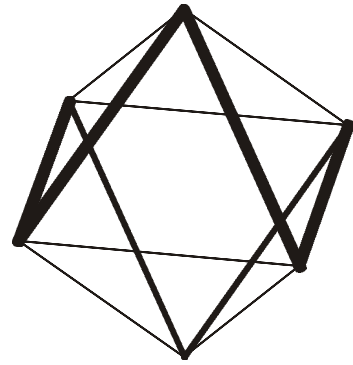




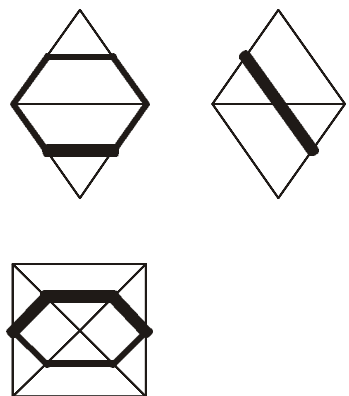
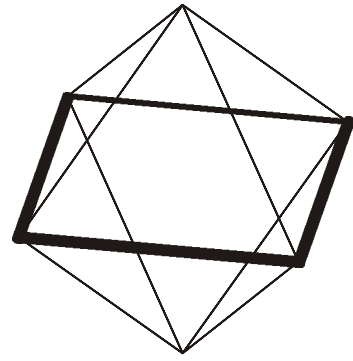
Partición regular
 Partes distintas: 1x2
 Caras distintas: 2
 Aristas distintas: 3



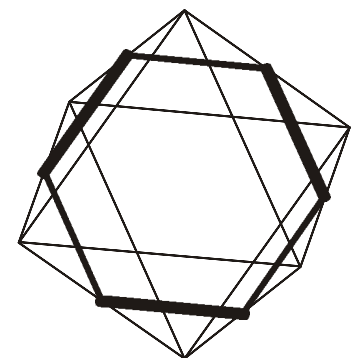
Partición regular
 Partes distintas: 1x2
 Caras distintas: 1
 Aristas distintas: 1

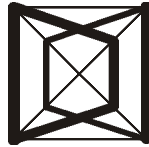
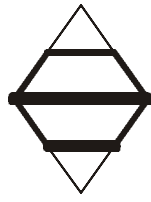
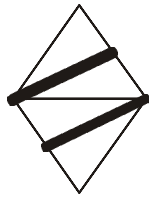


Partición regular
 Partes distintas: 1x2
 Caras distintas: 1
 Aristas distintas: 1

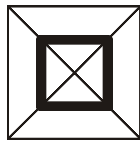
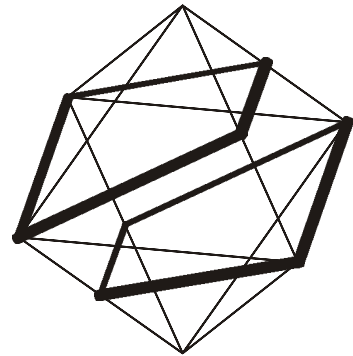


Partición regular
 Partes distintas: 1x2
 Caras distintas: 3
 Aristas distintas: 3

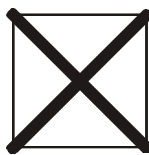
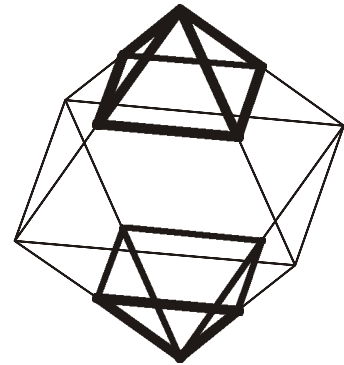




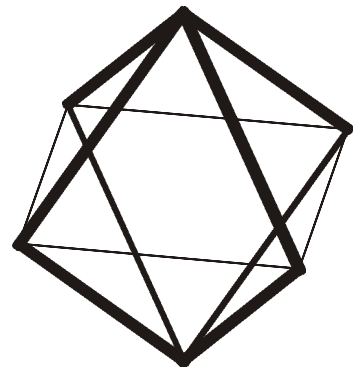
Partición
semiregular
Partes distintas: 1x2
/ 1



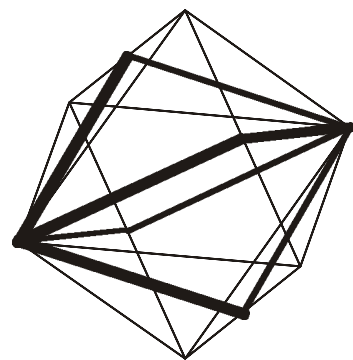
Partición
semiregular
Partes distintas: 1x2
/ 1

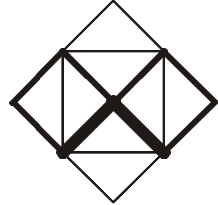
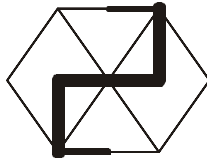
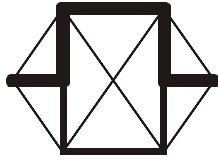


Partición regular
Partes distintas: 1x4
Caras distintas: 1
Aristas distintas: 1

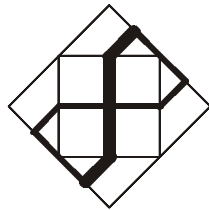
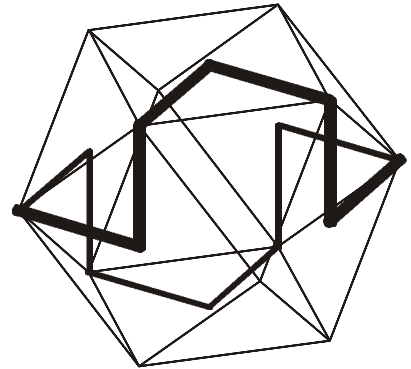


Partición regular
Partes distintas: 1x4
Caras distintas: 1
Aristas distintas: 3

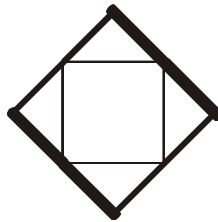
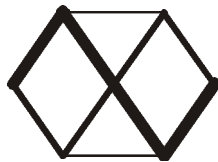
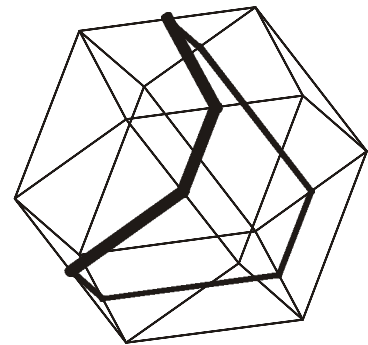




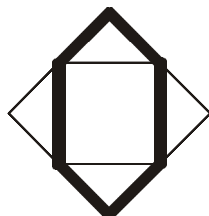
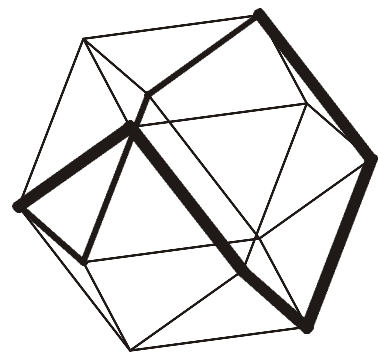
Partición regular
 Partes distintas: 1x2
 Caras distintas: 3
 Aristas distintas: 2



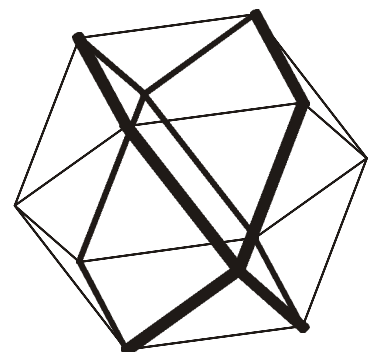
Partición regular
 Partes distintas: 1x2
 Caras distintas: 4
 Aristas distintas: 2

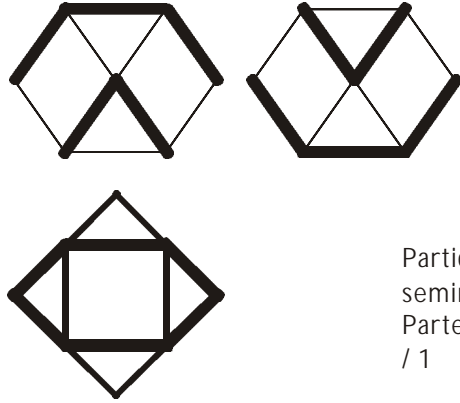


Partición regular
 Partes distintas: 1x2
 Caras distintas: 2
 Aristas distintas: 1

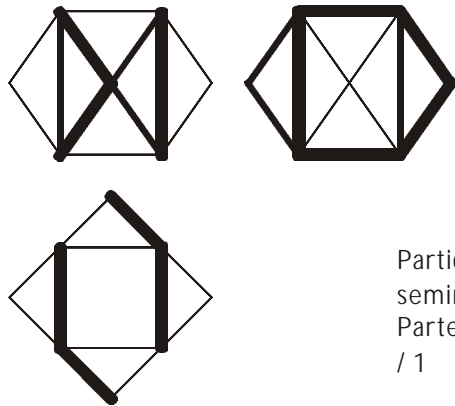
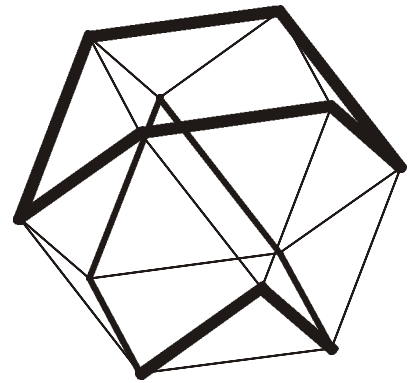


Partición semiregular
 Partes distintas: 2 X
 2

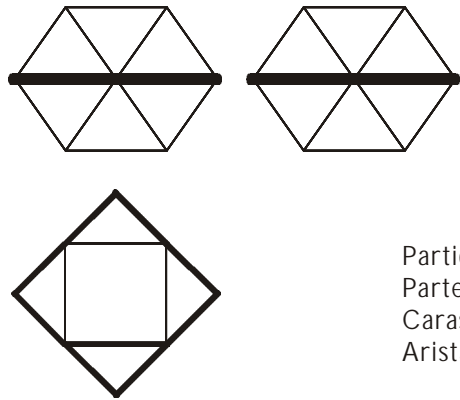
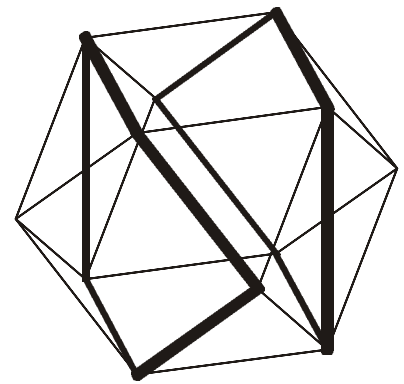




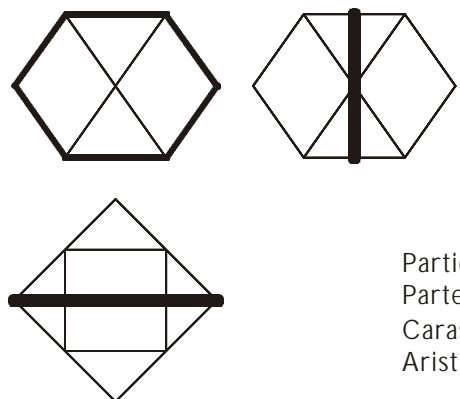
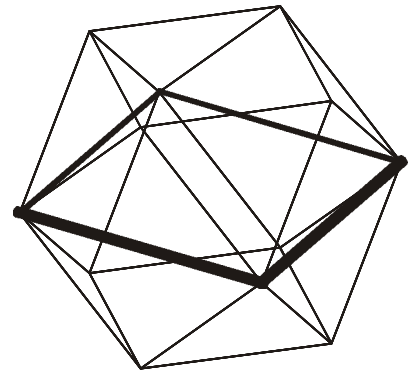
Partición
semiregular
Partes distintas: 1x2
/ 1



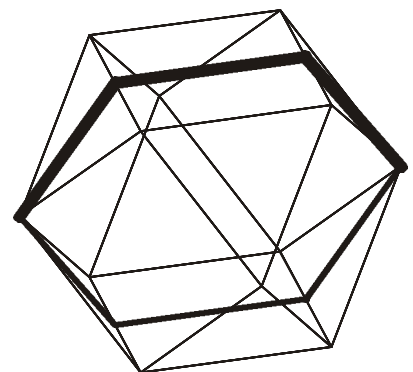
Partición
semiregular
Partes distintas: 1x2
/ 1

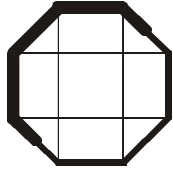
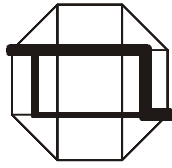
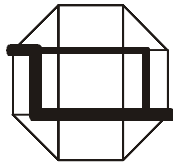


Partición regular
Partes distintas: 1x2
Caras distintas: 3
Aristas distintas: 2

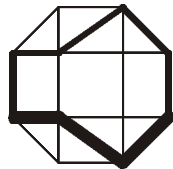
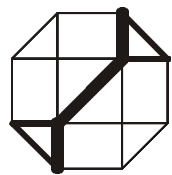
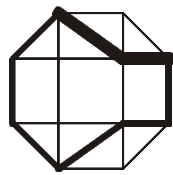
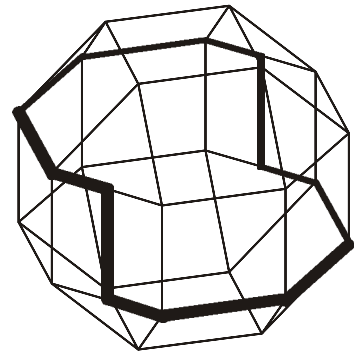


Partición regular
Partes distintas: 1x2
Caras distintas: 4
Aristas distintas: 3

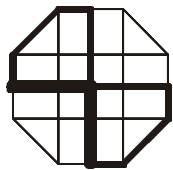
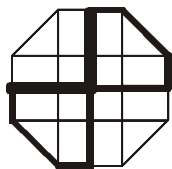
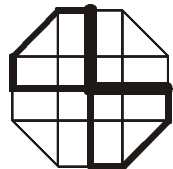
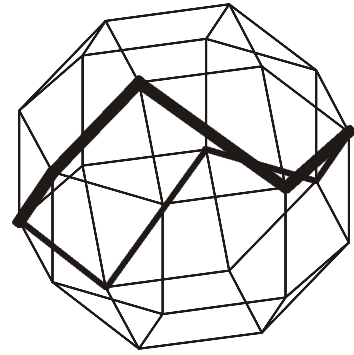




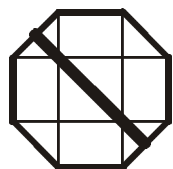
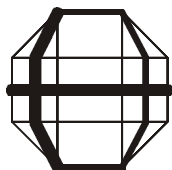
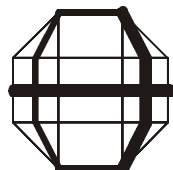
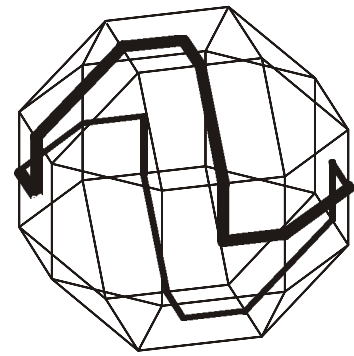
Partición regular
 Partes distintas: 1x 2
 Caras distintas: 3
 Aristas distintas: 2



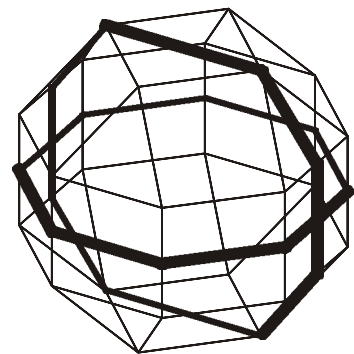
Partición regular
 Partes distintas: 1x2
 Caras distintas: 3
 Aristas distintas: 2

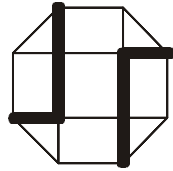
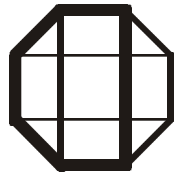
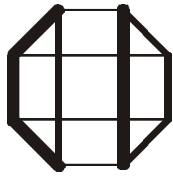


Partición regular
 Partes distintas: 1x2
 Caras distintas: 5
 Aristas distintas: 2

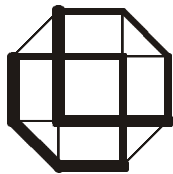
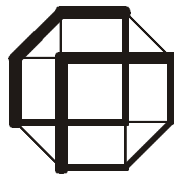
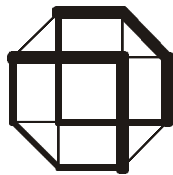
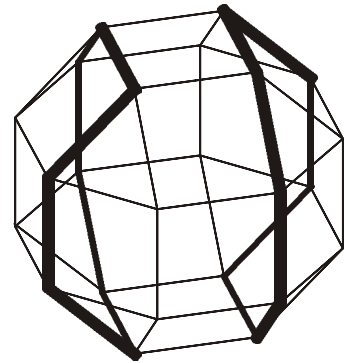


Partición regular
 Partes distintas: 1 x
 4
 Caras distintas: 5

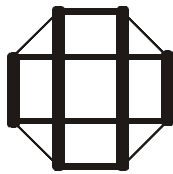
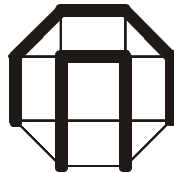
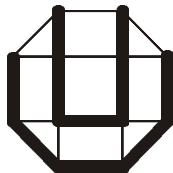
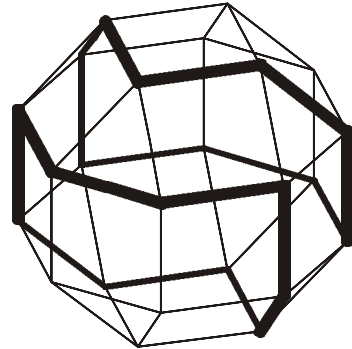




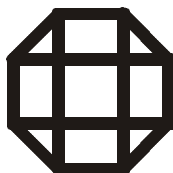
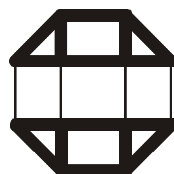
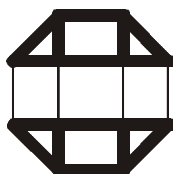
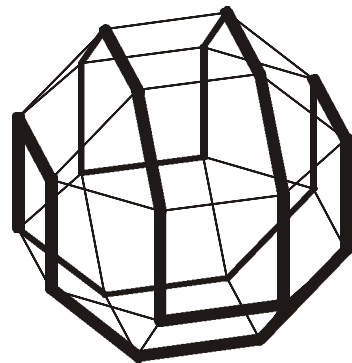
Partición
semiregular
Partes distintas: 1x2
/1



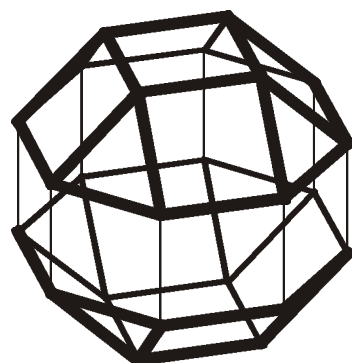
Partición
semiregular
Partes distintas: 1x2
/1

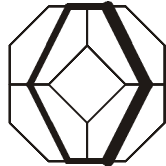
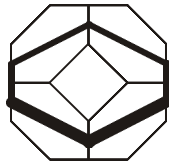
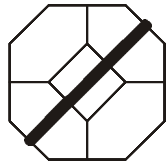


Partición
semiregular
Partes distintas: 1x2
/1

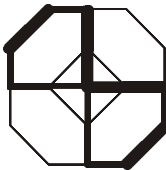
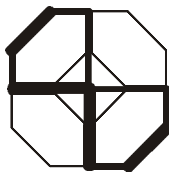
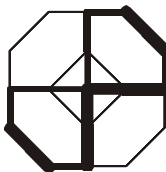
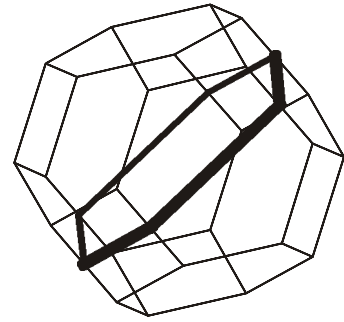


Partición
semiregular
Partes distintas: 1x2
/1

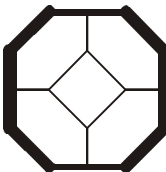
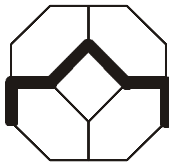
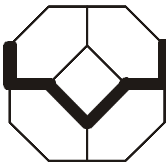
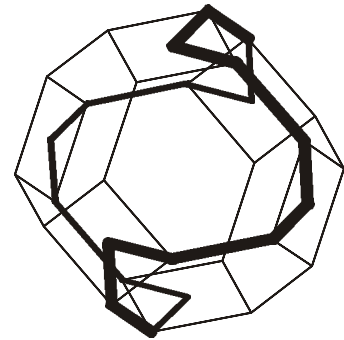




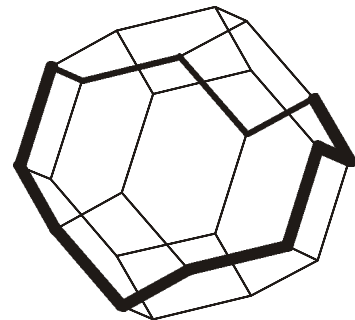
Partición regular
 Partes distintas: 1x2
 Caras distintas: 4
 Aristas distintas: 3



Partición regular
 Partes distintas: 1x2
 Caras distintas: 3
 Aristas distintas: 2



Partición regular
 Partes distintas: 1x2
 Caras distintas: 2
 Aristas distintas: 1



Partición regular
 Partes distintas: 1x2
 Caras distintas: 2
 Aristas distintas: 1

