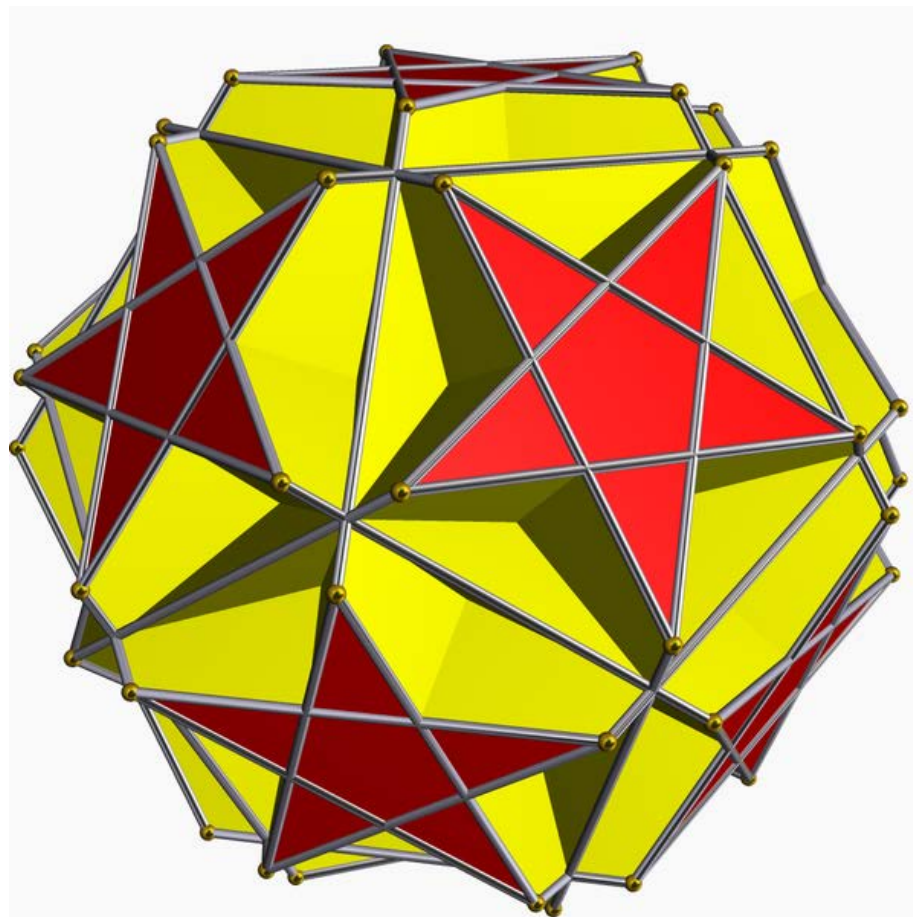


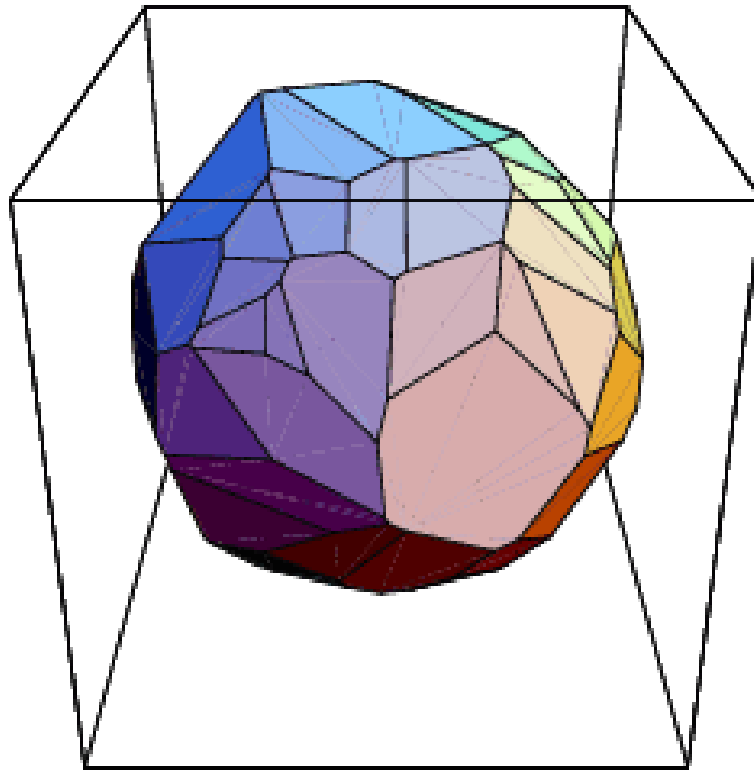
Mnohosteny ako ich nepoznáme

(ukážka z otvorenej hodiny realizovanej 25.5.2012 na ZŠ
sv. Augustína v Považskej Bystrici)



Mnohosten

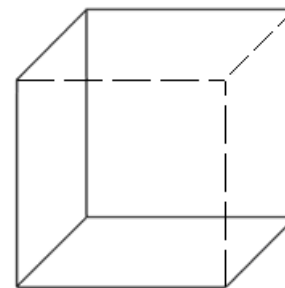
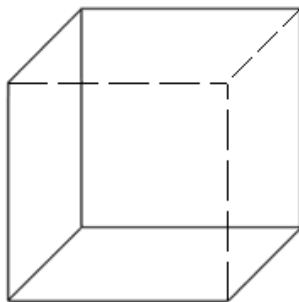
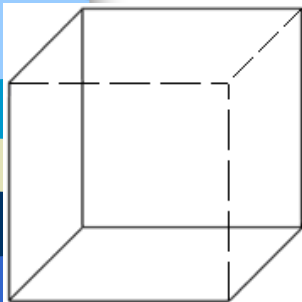
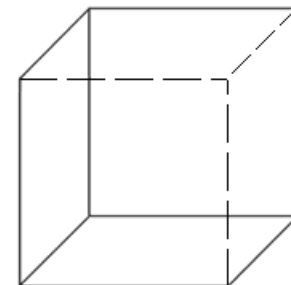
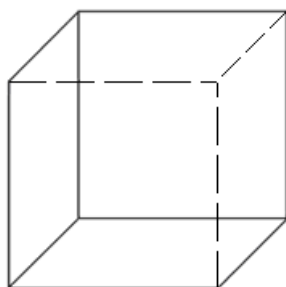
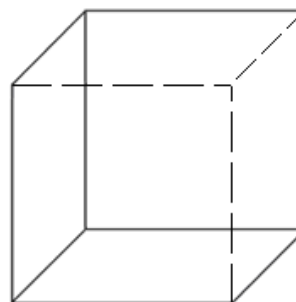
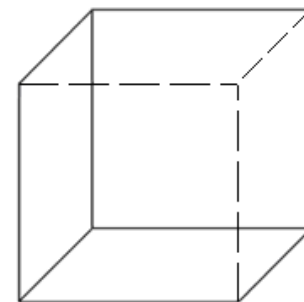
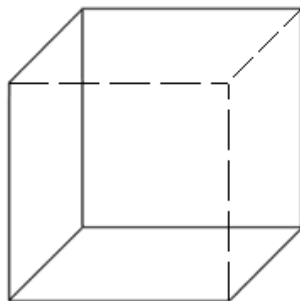
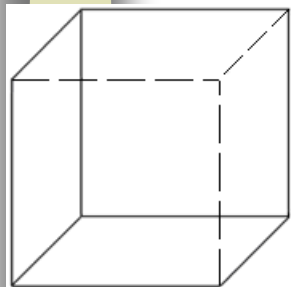
- je časť priestoru ohraničeného konečným počtom rovinných mnohouholníkov.



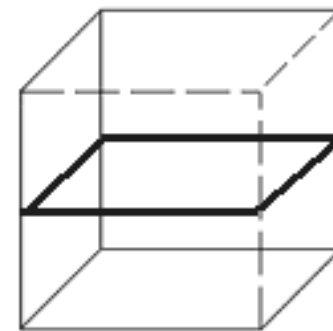
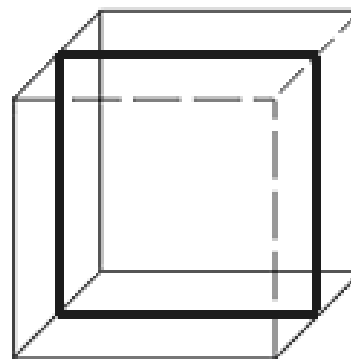
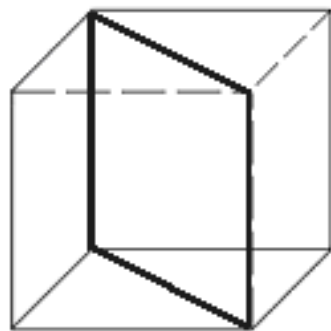
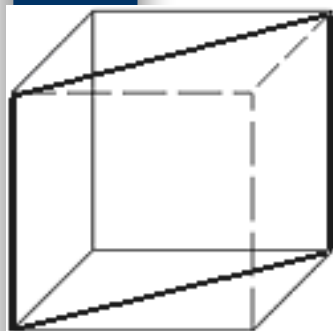
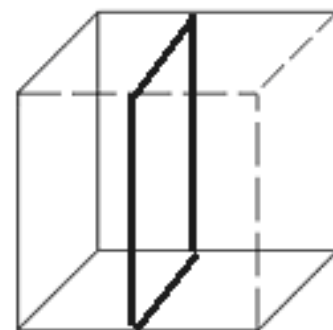
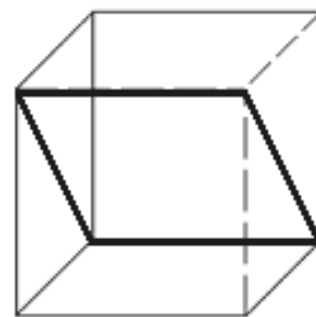
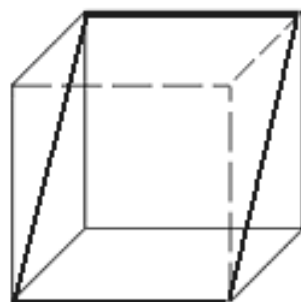
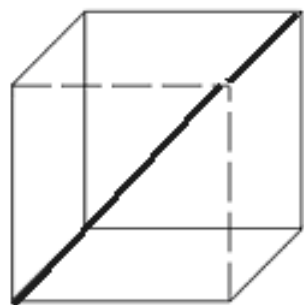
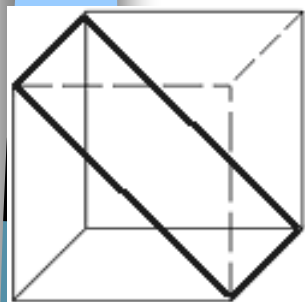
**Aký tvar majú predmety na obrázku?
Ktoré z nich sú mnohosteny?**



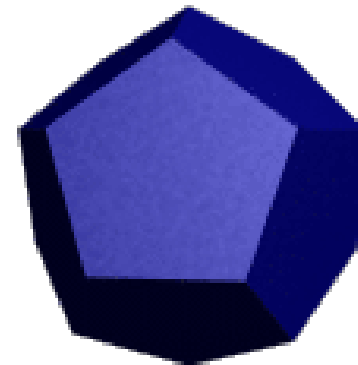
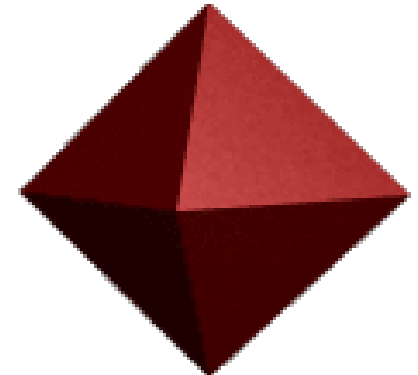
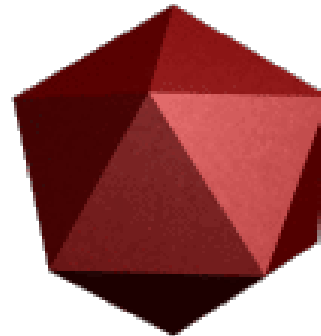
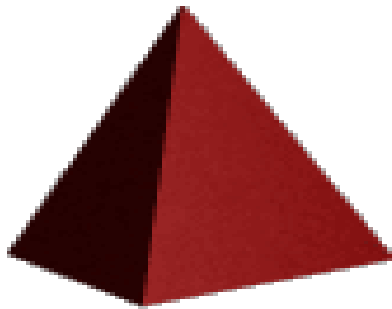
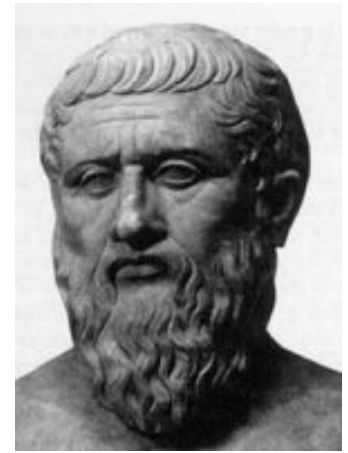
**Aj kocka patrí medzi mnohosteny, vieš
nájsť jej 9 rovín symetrie ?**



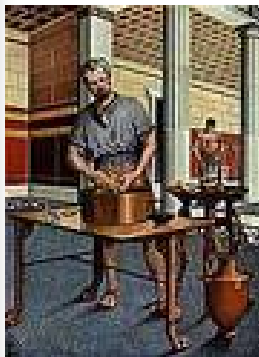
Riešenie



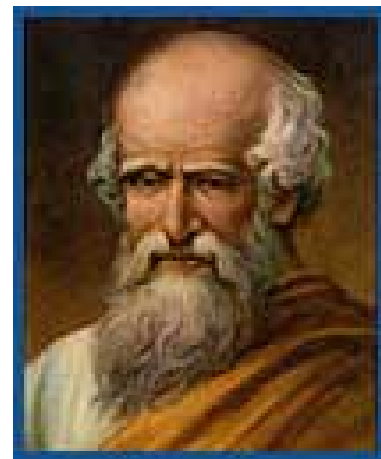
Platónske telesá (pravidelným mnohostenom, PT) nazveme konvexný mnohosten ohraničený zhodnými pravidelnými konvexnými rovinnými mnohouholníkmi, pričom z každého jeho vrcholu vychádza rovnaký počet hrán.



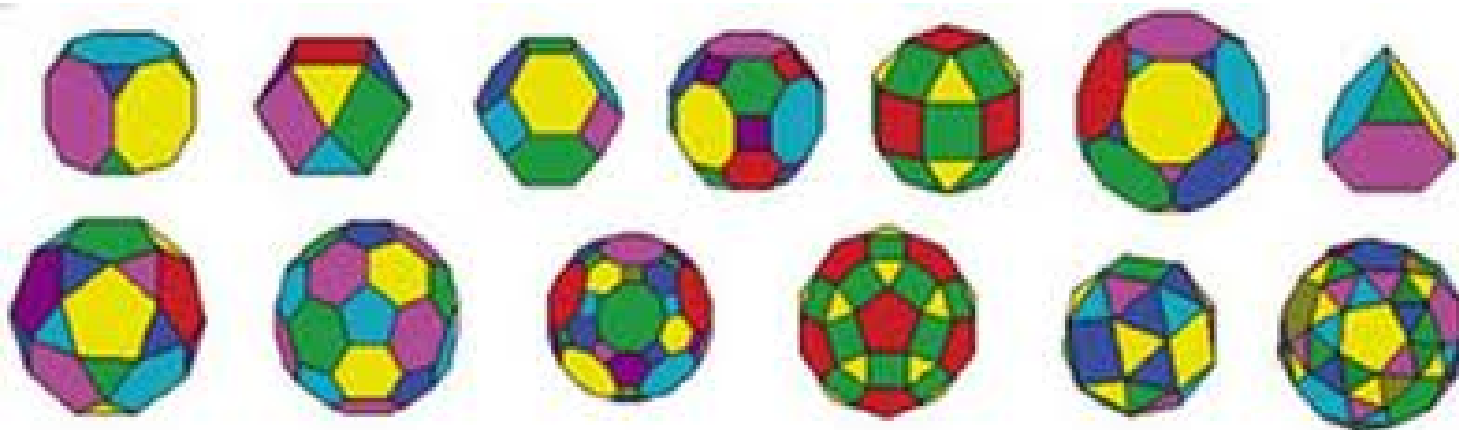
Archimedesove telesá



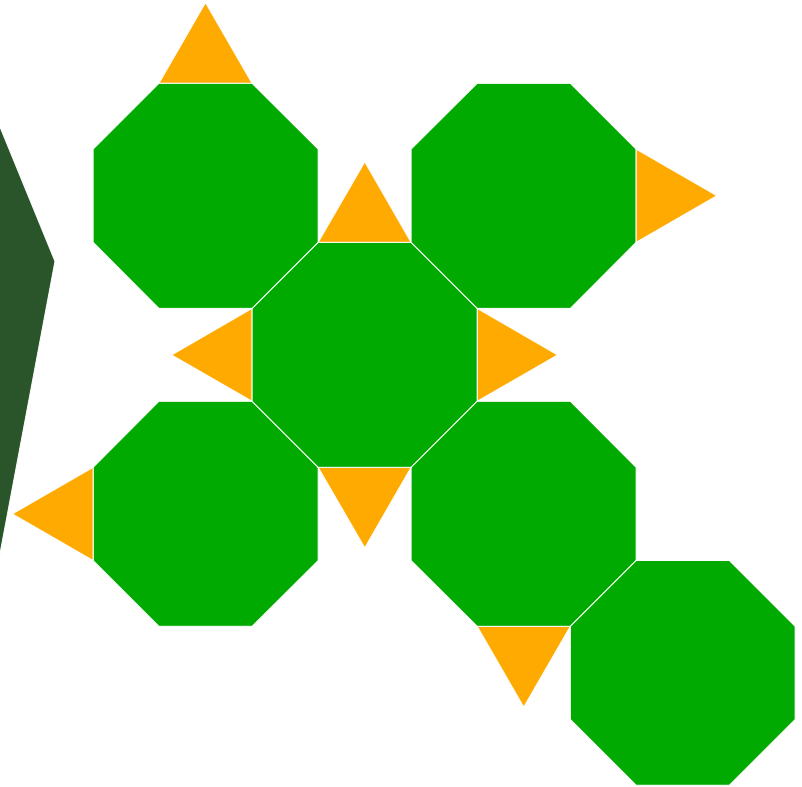
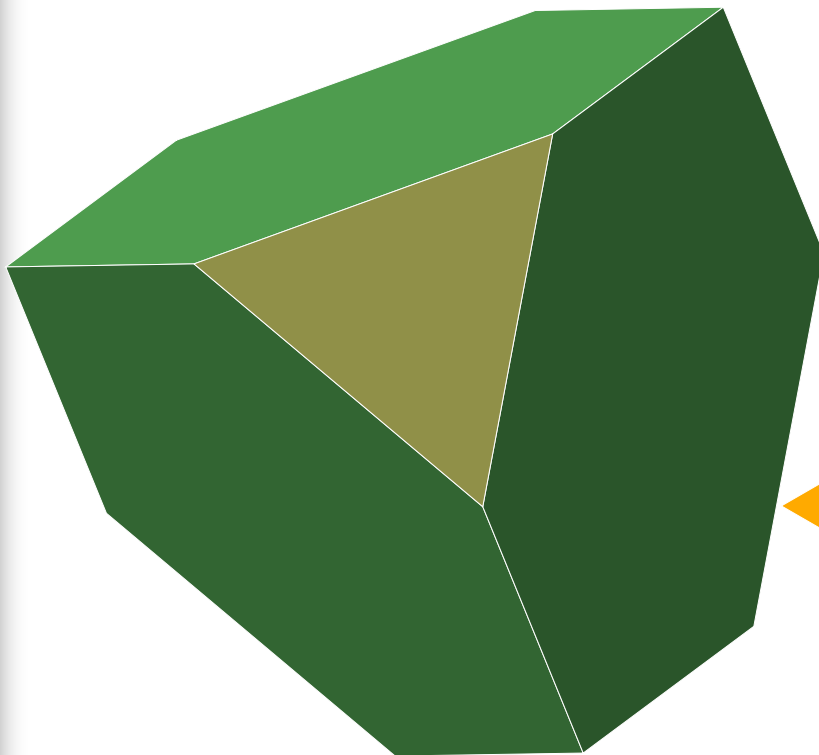
Archimédes ze Syrakus
287 – 212 př. n. l.



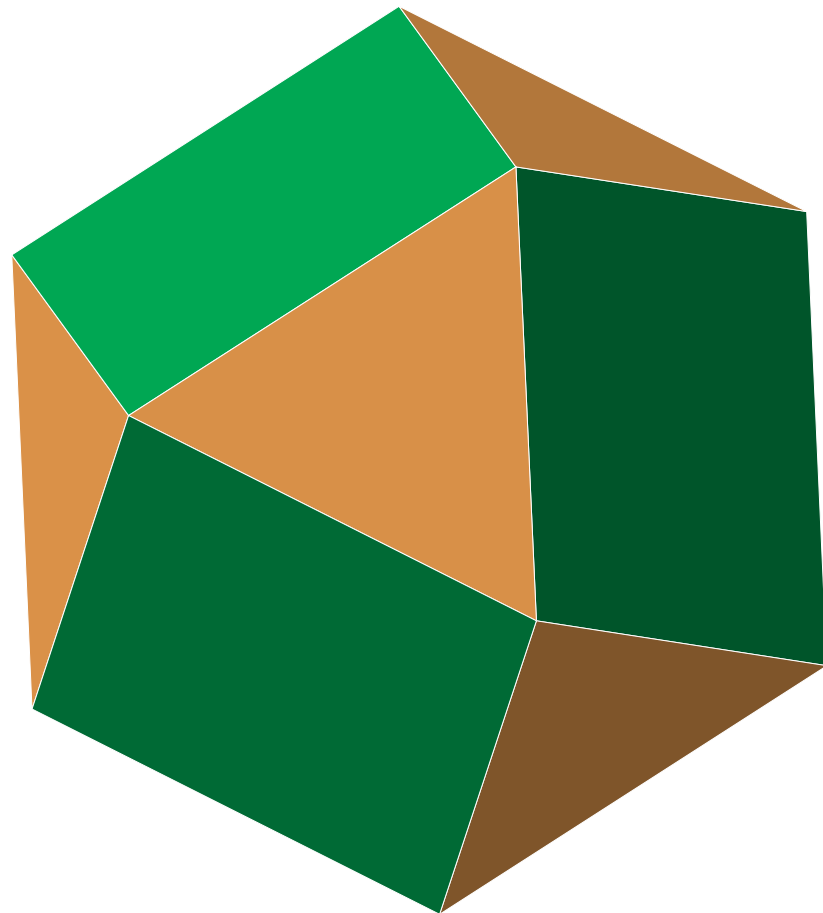
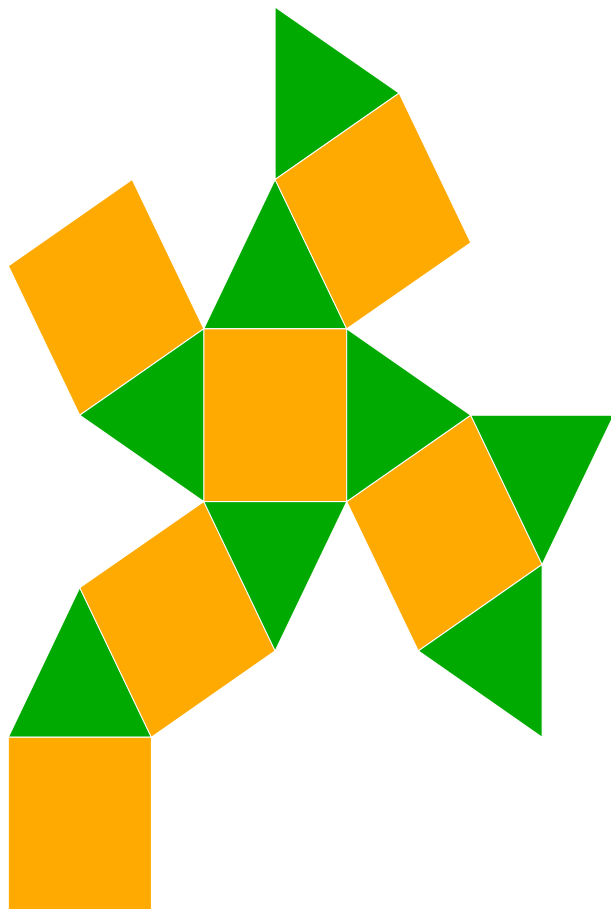
Vytvoríme ich odrezaním vrcholov alebo hrán z platónskych telies tak, aby steny boli tvorené pravidelnými n - uholníkmi dvojakého druhu



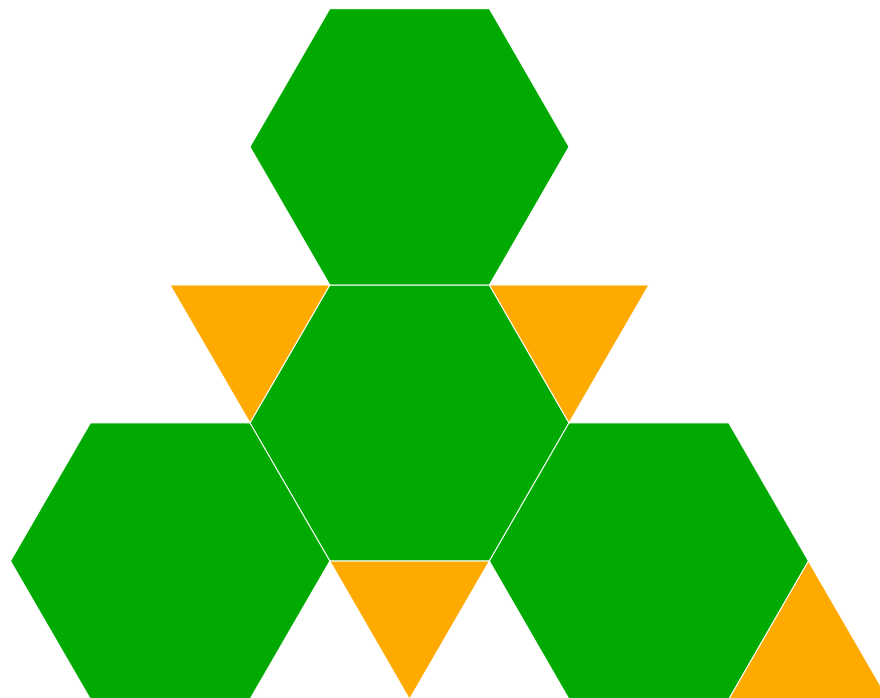
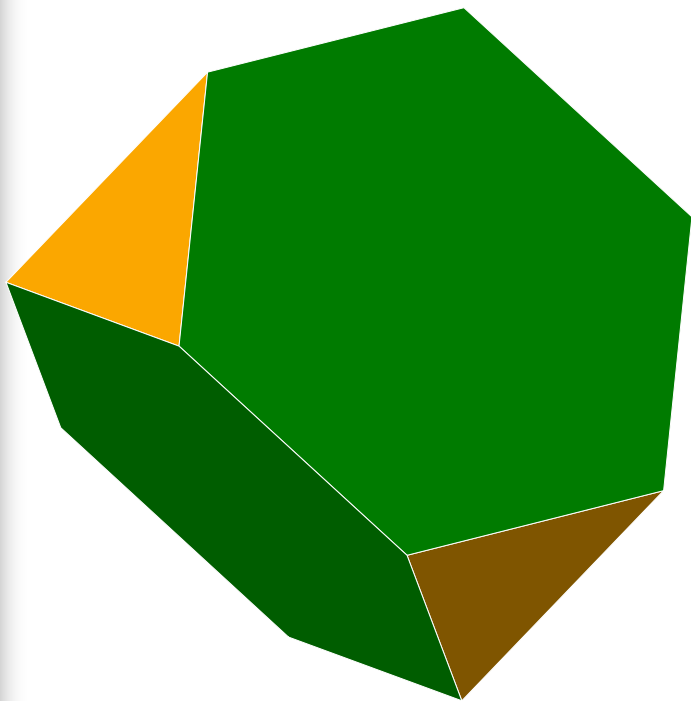
Zrezaný šest' sten



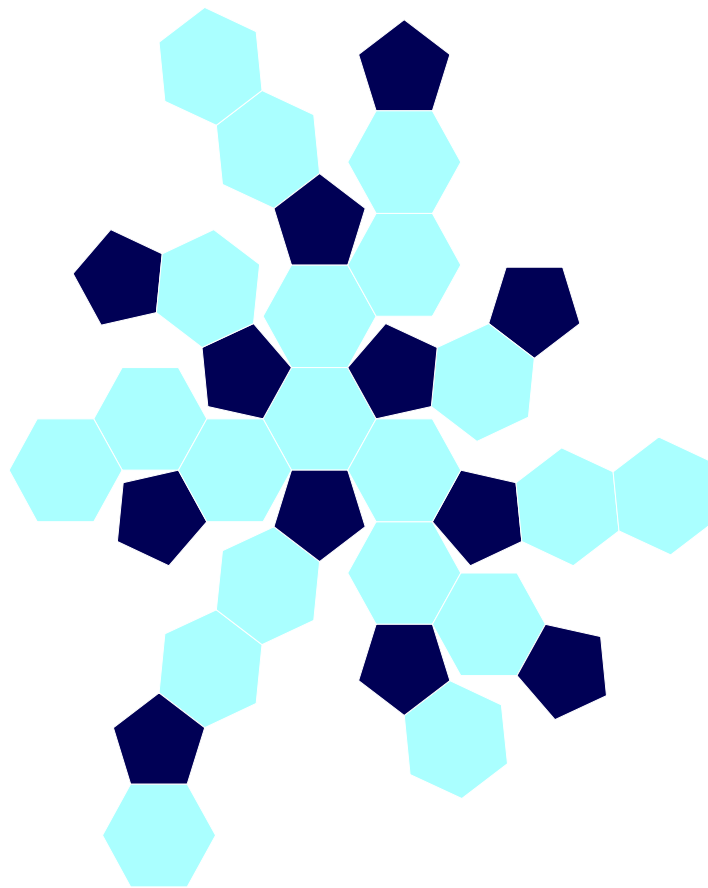
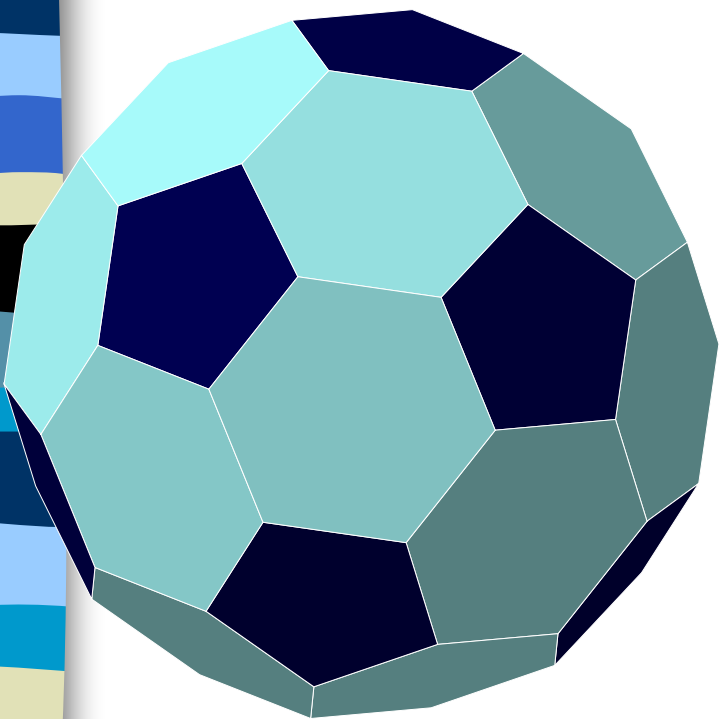
Šest'osemsten



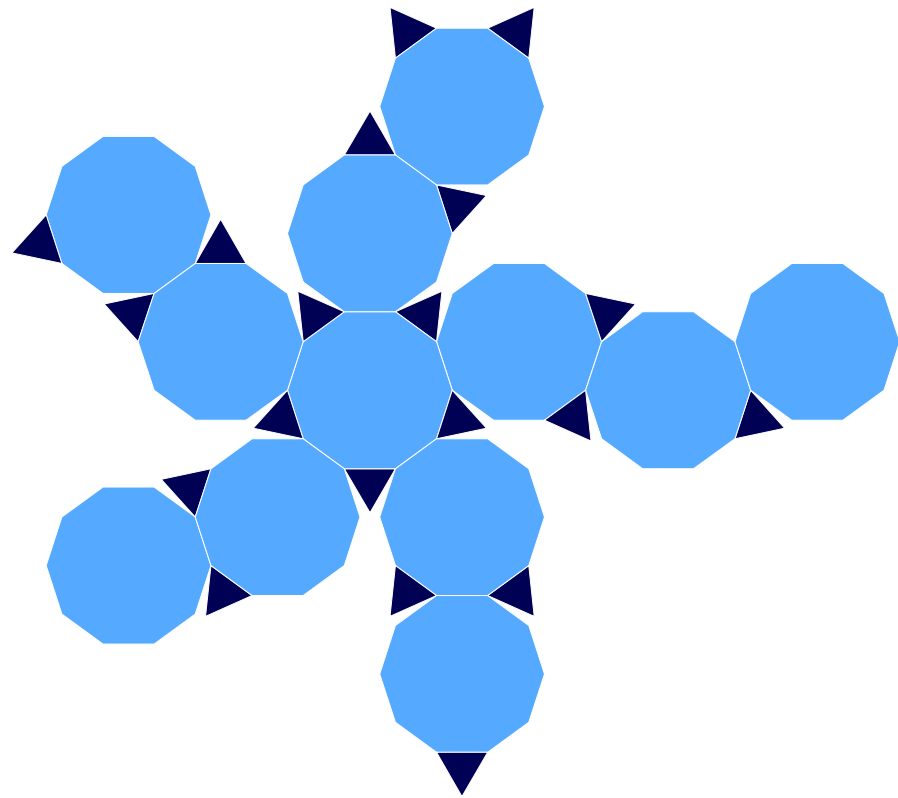
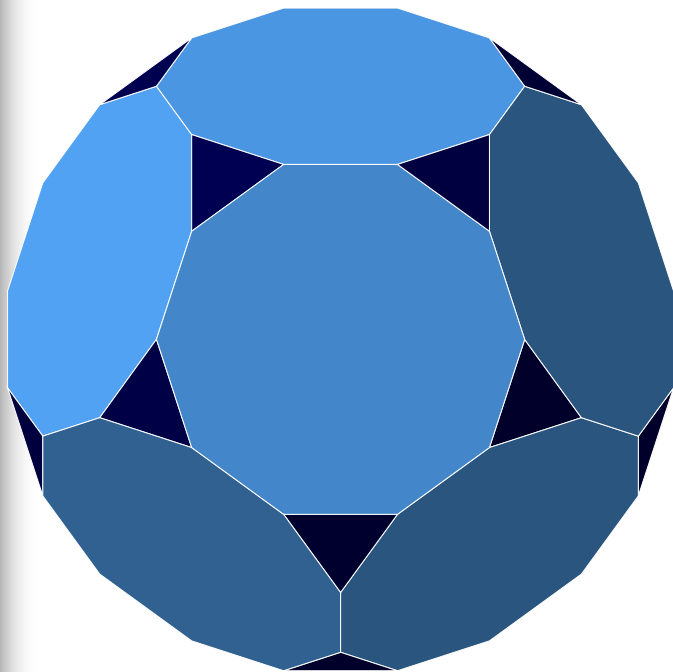
Zrezaný štvorsten



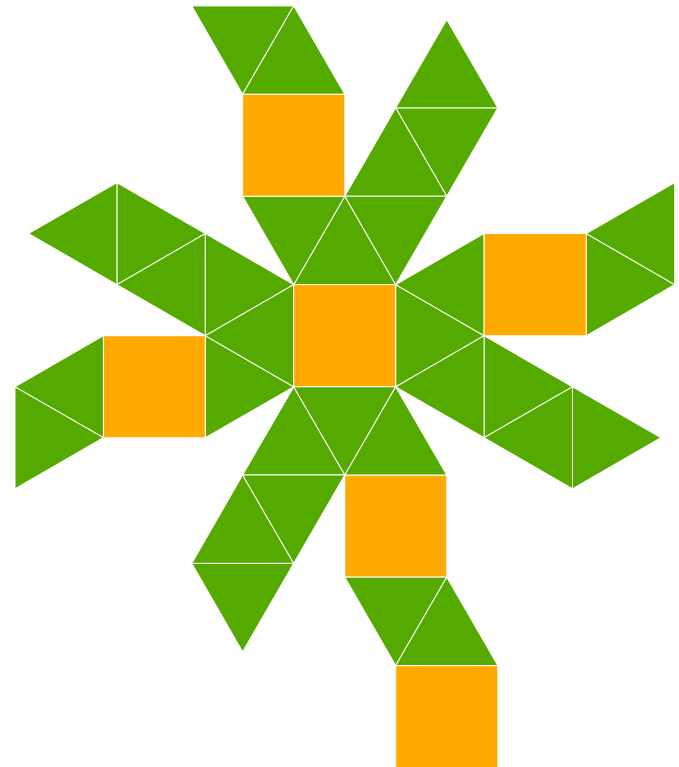
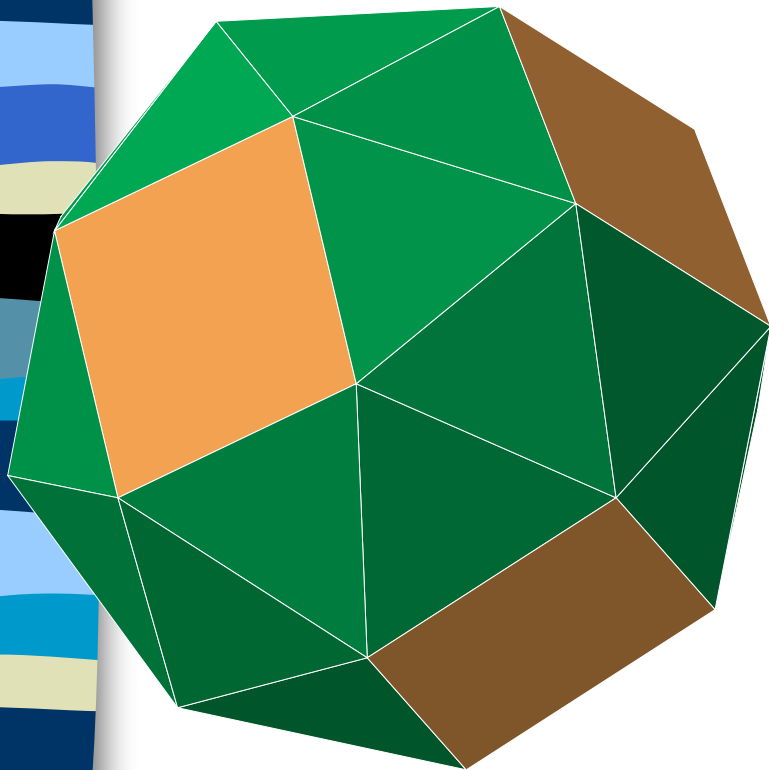
Zrezaný dvadsaťsten



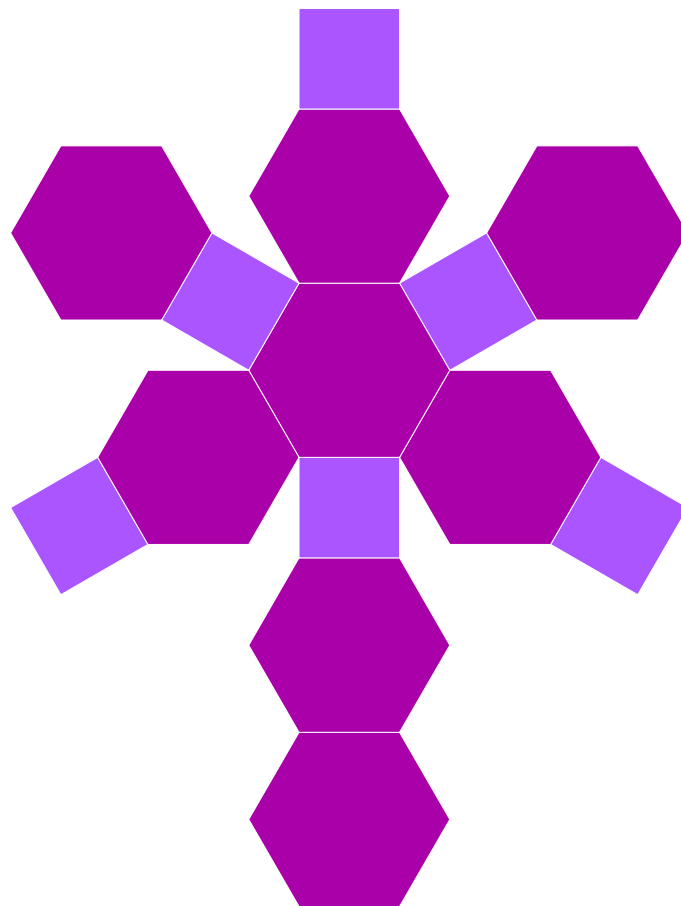
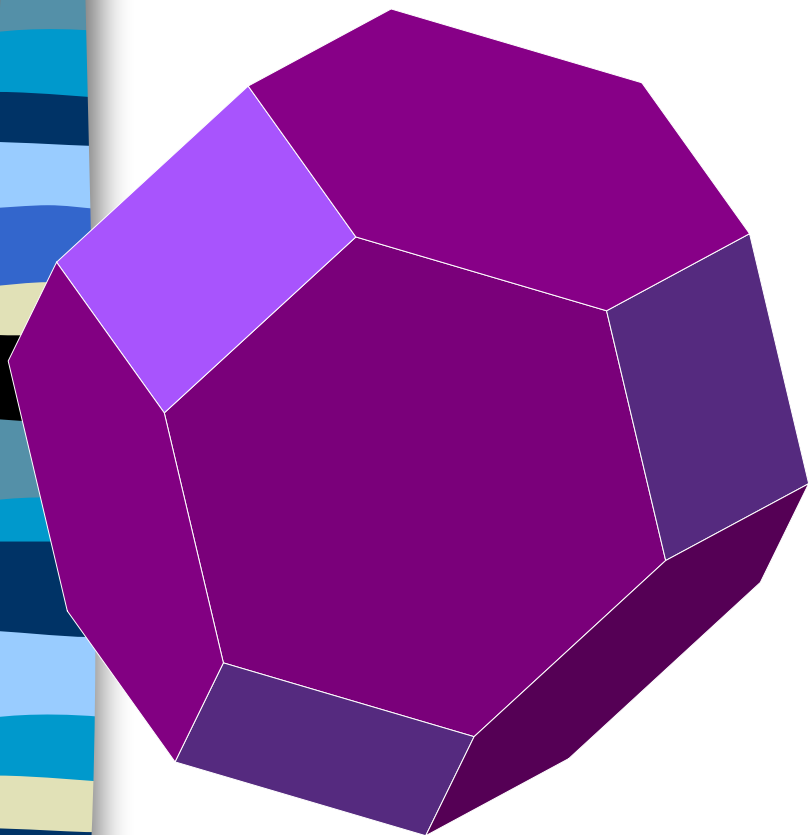
Zrezaný dvanášťsten

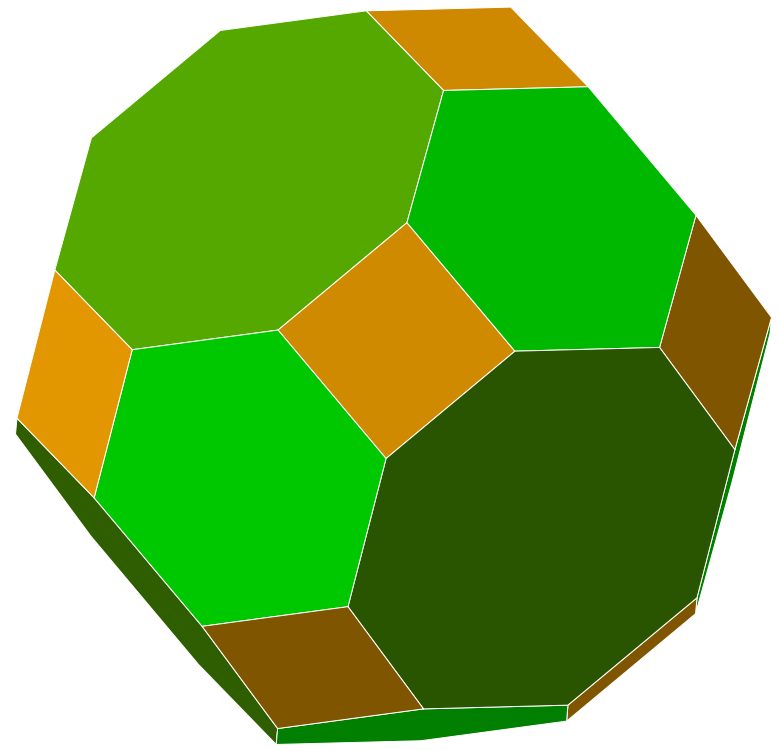
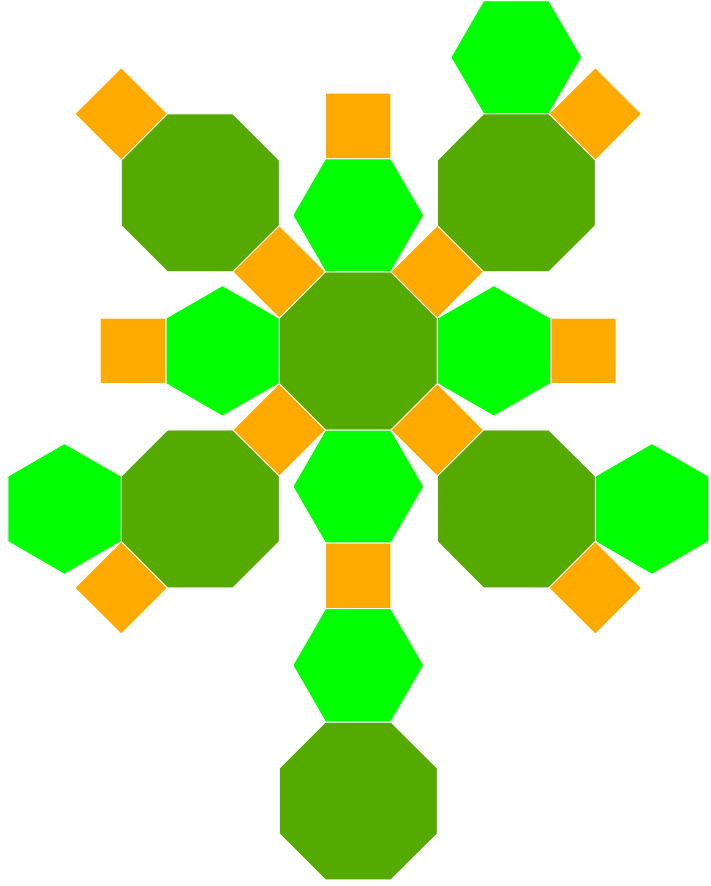
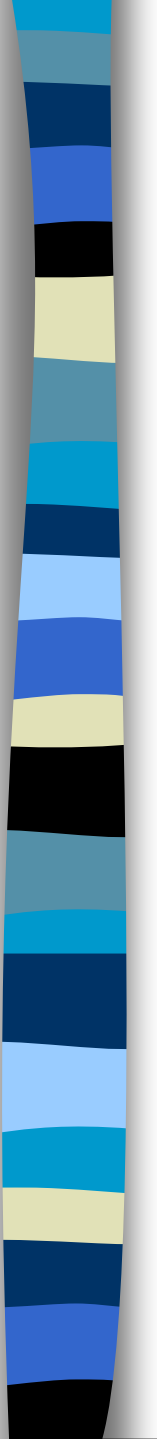


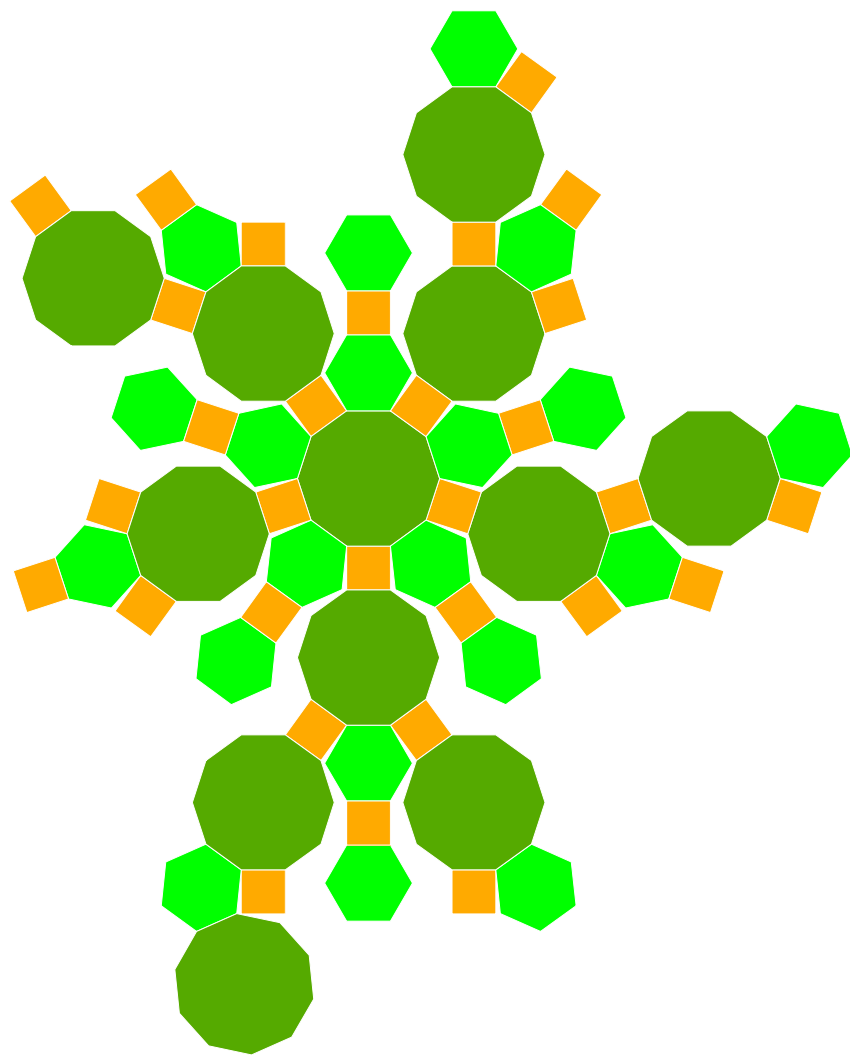
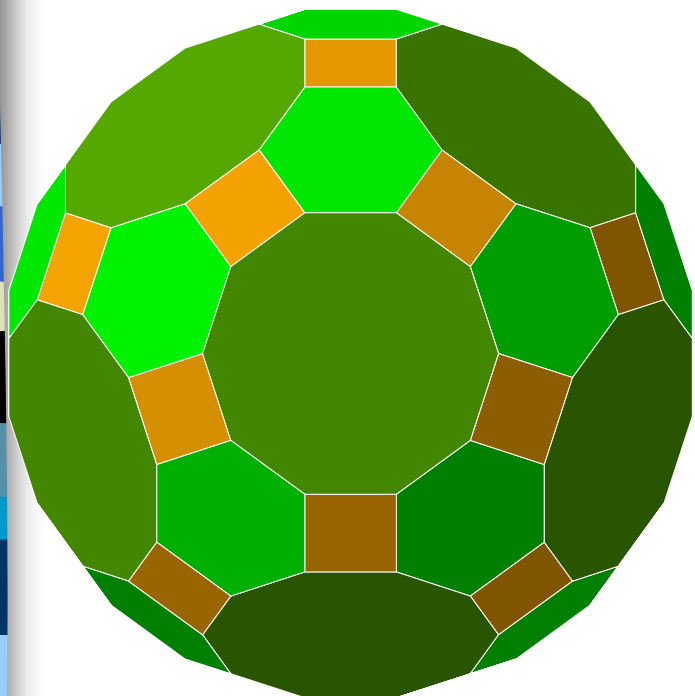
Zrezaný šest'sten



Zrezaný osemsten





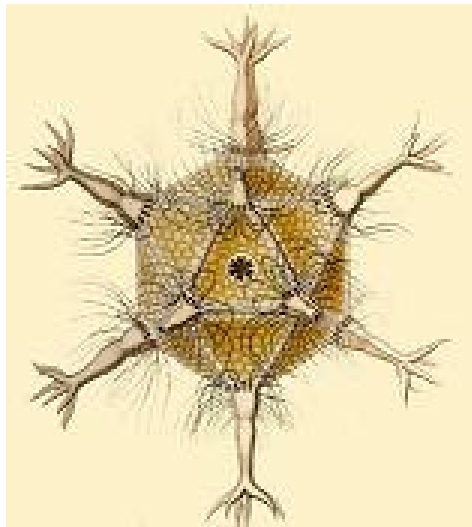
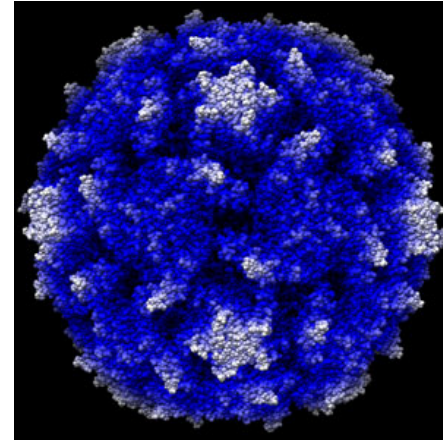


Platónove telesá okolo nás

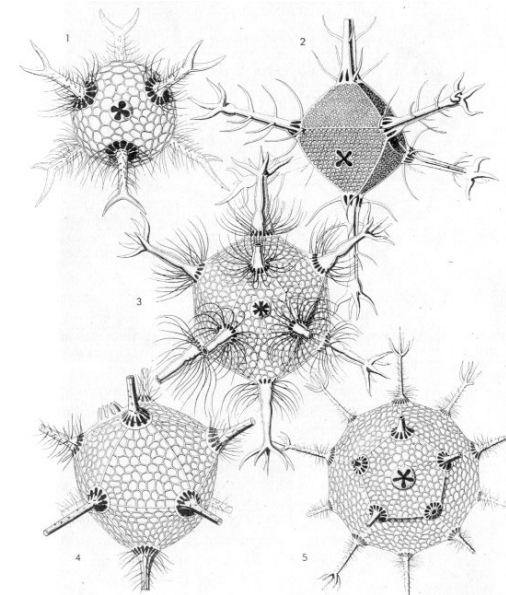
Mriežovka červená



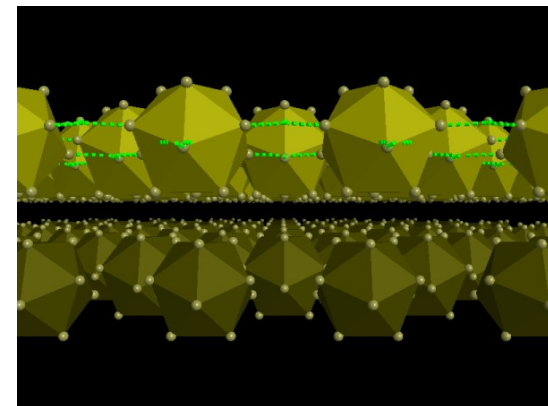
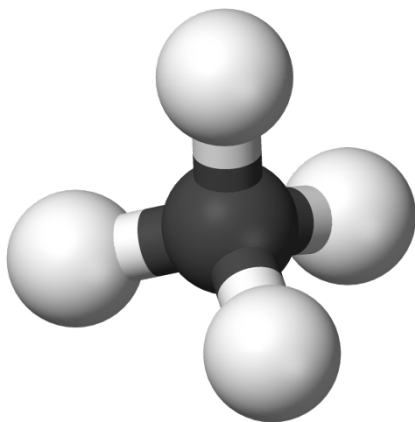
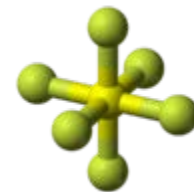
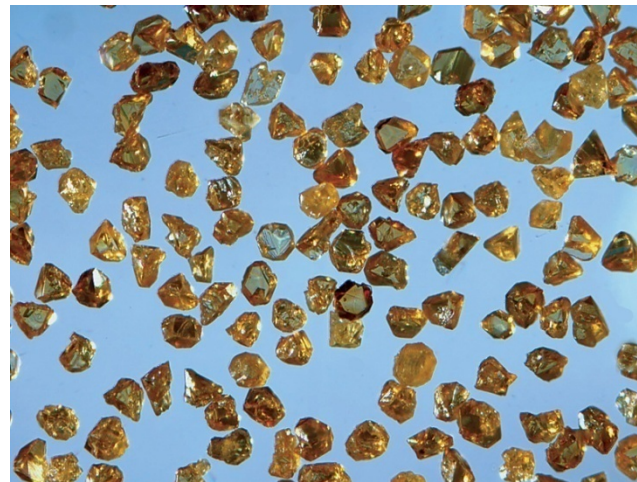
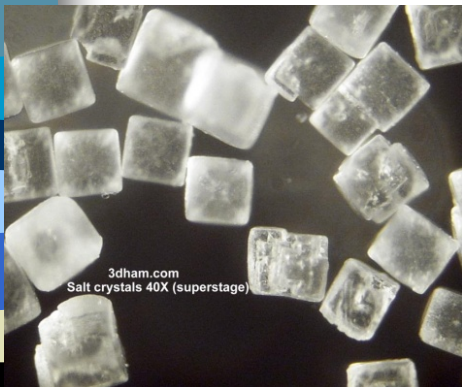
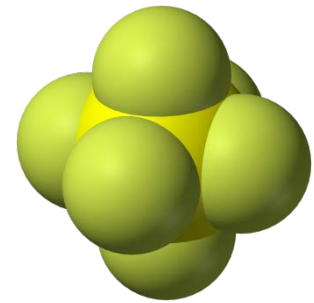
Virus detskej obrny



Radiolaria
(mriežovci)



Mnohosteny v chémii



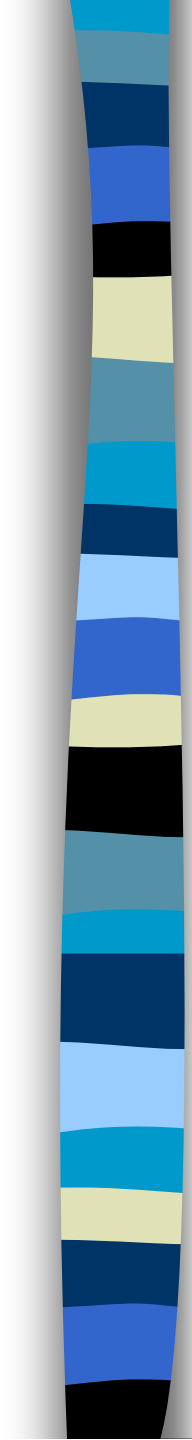


Úloha

- Vytvořte papírové modely vylosovaných archimedesových těles.

A takto sa nám darilo pri výrobe archimedových telies...









Mriežka z pravidelných mnohostenov



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