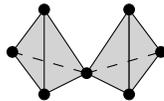


### Comprehension questions

PROBLEM 31.1. *Take two tetrahedra, stuck together at a vertex. Is that a surface? (Short explanation please.)*



PROBLEM 31.2. *Show explicitly that the octahedron is orientable.*

PROBLEM 31.3. *As stated in the lecture, a surface must have an even number of triangles. Why?*

PROBLEM 31.4. *Is there a surface (any number of components is allowed) with Euler characteristic 3? If there is, give an example; if there isn't, explain why not.*

PROBLEM 31.5. *The triangle tilings (6.9) and (6.11) are periodic, and therefore one can get a combinatorial version of the torus from each of them. Draw those two surfaces (remembering that according to our definition, different edges can never have the same endpoints).*

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