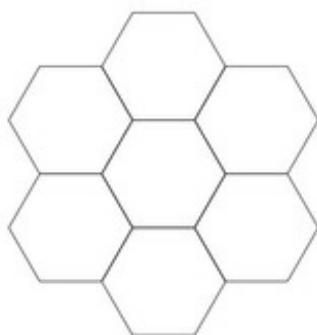


F-LE Graphene

Task

Graphite is a mineral with many technological uses and it is perhaps most familiar for its use in writing instruments. At the atomic level, it is made of many layers of carbon atoms, each layer arranged in the familiar pattern of hexagonal tiles:



The pattern continues on in all directions and there is a single carbon atom at each vertex.

Graphene is a 1 atom thick layer of graphite with many interesting properties and uses. Suppose the thickness of graphene is 200 picometers: one picometer is *one trillionth* of a meter. About how many times would you have to split a 1 mm thick sample of graphite in half in order to get a single layer of graphene? Explain.



F-LE Graphene

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