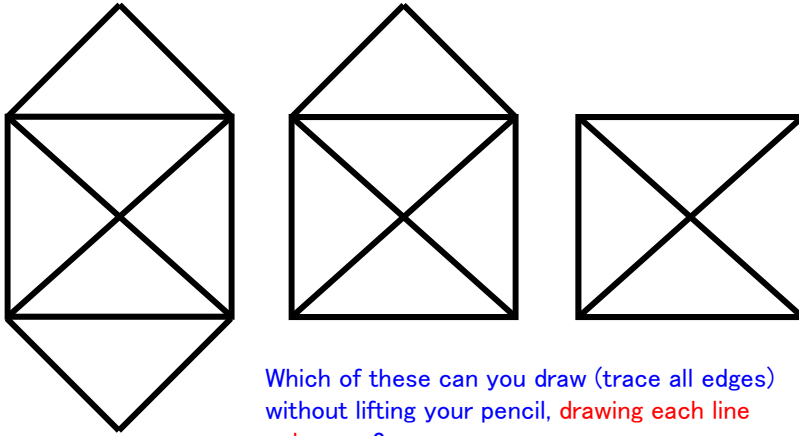


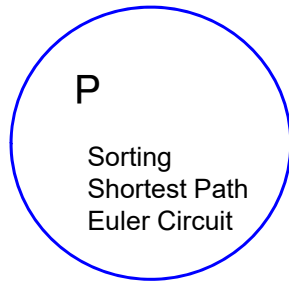
Try it!



Which of these can you draw (trace all edges) without lifting your pencil, drawing each line only once?
Can you start and end at the same point?

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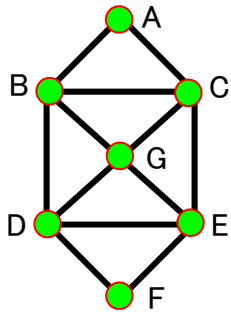


Hamiltonian Circuit
Satisfiability (SAT)
Vertex Cover
Travelling Salesman

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Euler Circuit Example



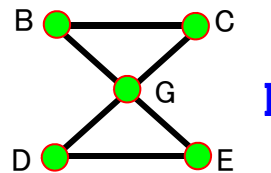
Euler(A) :

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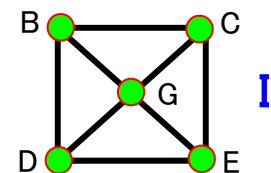
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Hamiltonian Circuits

- **Euler circuit:** A cycle that goes through each *edge* exactly once
- **Hamiltonian circuit:** A cycle that goes through each *vertex* exactly once
- Does graph I have:
 - An Euler circuit?
 - A Hamiltonian circuit?
- Does graph II have:
 - An Euler circuit?
 - A Hamiltonian circuit?
- Which problem sounds harder?



I



II

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