$\mathcal{NP}$

Which of these decision problems are in $\mathcal{NP}$?

- 2-colorability (Can the input graph be vertex-colored with red and blue, so that no edge connects vertices of the same color?)
- 3-colorability (Can the input graph be vertex-colored with red, blue, and green, so that no edge connects vertices of the same color?)
- 2-SAT (Is the input 2CNF formula satisfiable?)
- 3-SAT (Is the input 3CNF formula satisfiable?)
- Hamiltonian Graph (Does the input graph have a cycle (or path) that visits every vertex exactly once?)
- Eulerian Graph (Does the input graph have a circuit (or path) that visits every edge exactly once?)