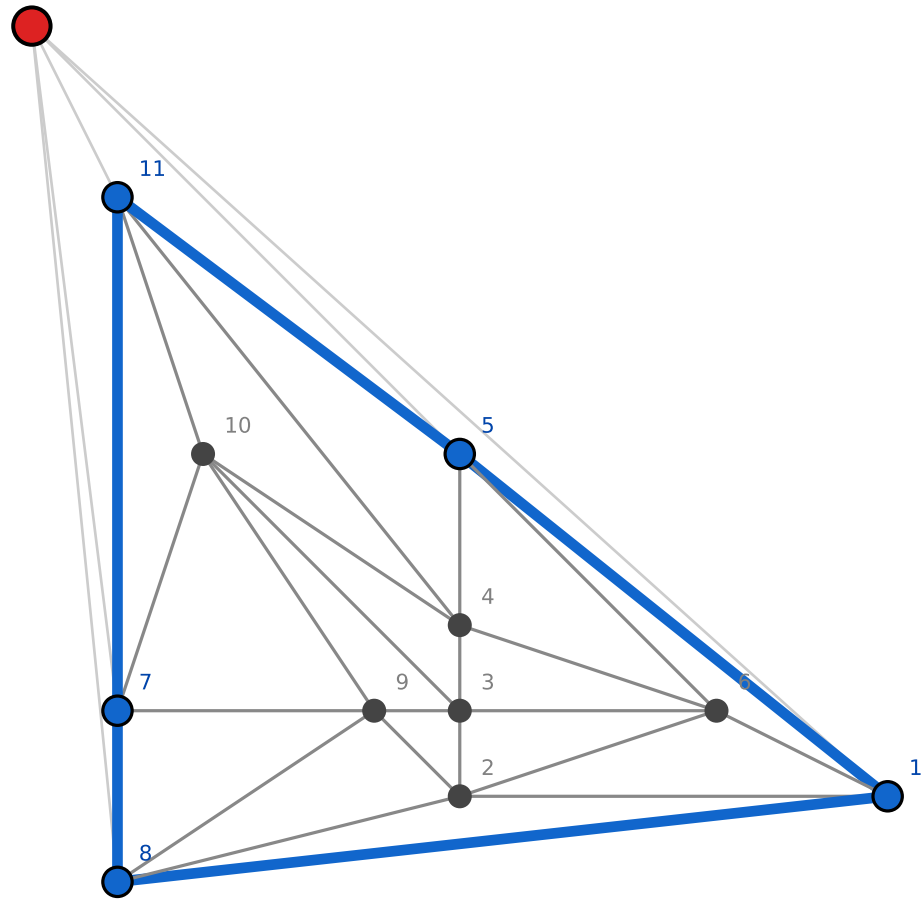


Icosahedron: 5-vertex cut (blue) isolating one vertex (red).
 This is the ONLY kind of small cut permitted by Birkhoff's condition.
 (isolated)



Birkhoff (1913): internally 6-connected

- 3-vertex cut
(separating triangle) **FORBIDDEN**
- 4-vertex cut
(separating quadrilateral) **FORBIDDEN**
- 5-cut isolating ≥ 2 vertices **FORBIDDEN**
- 5-cut isolating exactly 1 vertex **ALLOWED**

*A minimum 4CT counterexample, if one exists,
 must satisfy all of the above.*