

Applied Combinatorics Quiz 2

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True-False:

- T 1. There is a graph G with $\omega(G) = 2$ and $\chi(G) = 100$.
- T 2. There is a graph G with $\omega(G) = 3$ and $\chi(G) = 100$.
- F 3. There is a planar graph G with $\omega(G) = 2$ and $\chi(G) = 100$.
- F 4. If $\chi(G) = 3$, then G is perfect.
- T 5. There is a perfect graph with 240 vertices and 1024 edges.
- F 6. There is a poset with 4215 points having width 79 and height 39.
- T 7. There is a poset with 4215 points having width 97 and height 93.
- F 8. When $n \geq 3$, the shift graph S_n contains a triangle.
- F 9. When $n \geq 2$, the shift graph S_n has $C(n, 3)$ vertices.
- F 10. When $n \geq 2$, the shift graph S_n has $C(n, 2)$ edges.