

# Manipulating Graphs

## **Adding vertices to graphs:**

Suppose you add a vertex  $v$  to  $G$  and make  $v$  adjacent to every vertex in  $V$ .

Let the new graph be called  $G'$ .

How do these values change between  $G$  and  $G'$ ?

- ▶ the size of the maximum clique,
- ▶ the size of the maximum independent set,
- ▶ the chromatic number