

1. (1 pt.)

- This *quick check* is **closed book, notes, etc.**
- You may use a 3 in.  $\times$  5 in. **reference card**, *hand-written by you*.
- Use the **classroom and textbook conventions** and terminology.

Read the above carefully; then write your name below:

2. (2 pts.) Provide the textbook's definition of the *weight*  $w(p)$  of a path

$$p = \langle v_0, v_1, \dots, v_k \rangle.$$

3. (2 pts.) Provide the textbook's definition of the *shortest-path weight*  $\delta(u, v)$  from  $u$  to  $v$ .

4. (2 pts.) List and briefly explain any two of the six properties of shortest paths and relaxation as noted in the textbook.

5. (3 pts.) List the three variants of single-source shortest-paths problems highlighted in textbook.