

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. (3 pts.) Define the *set-covering problem*.

3. (3 pts.) Provide the textbook's definition of the *d'th harmonic number* H_d .

4. (3 pts.) Fill in the blanks based on a major result from Section 35.3 of the textbook:
GREEDY-SET-COVER is a polynomial-time _____ approximation algorithm.