Exam strategy

- Start with short-answer questions
  - If you get stuck, move onto next one
- Do assertion problem
  - Start with the easy parts
  - Spend a few minutes working through the less obvious parts, but if you get stuck, don’t waste time here and move onto the programming problems
- Programming problems
  - If feeling overwhelmed: boost your confidence by imagining you’re helping a friend or friendly child figure out how to solve this problem; write down the steps in English (might get partial credit if you wrote down some of the right steps)
  - Then, try to write the code
  - Write SOMETHING for every problem--no writing \( \Rightarrow \) no credit
  - If taking too long on one problem, move onto the next one--no more than 20 minutes on each programming problem!!
- If have to skip one whole problem, the assertion one is worth the least.
Points breakdown

15 short answer questions (2 points each, 30 points total)

Assertion problem with 10 always/sometimes/never (1 point each, 10 points total)

3 programming problems (20 points each, 60 points total)

- Strings--study how you can go through a String one character at a time; you've done this in assignments before, so please study your assignments
- Study how we did dice rolling with the Random class
- Study how we can go through an integer one digit at a time, like we did in class a couple of times
What to study

- Cumulative sums
- String methods
  - charAt(int)
  - substring(int, int)
  - substring(int)
  - length()
  - indexOf(char)
  - contains(String)
  - toUpperCase()
  - toLowerCase()
  - equals(String)
  - equalsIgnoreCase(String)
What to study

- **Random class**
  - How to create a Random object (Random r = new Random();)
  - r.nextInt(int)

- **Arrays:**
  - Quick initialization, e.g., int[] a = {1, 2, 3};
  - Arrays.toString(a)
  - a.length
  - Indexing into an array, e.g., a[0] = 3; or int b = a[1];
  - Valid index range of an array: a[0] to a[a.length - 1]
  - Array initialized with new int[number] or new double[number] is filled with 0s or 0.0s, respectively; new String[number] fills array with nulls
What to study

● Scanners
  ○ Exactly how next(), nextInt(), and nextDouble() work
  ○ What hasNext(), hasNextInt(), and hasNextDouble() do

● Boolean expressions
  ○ DeMorgan’s laws, or just how to plug in trues and falses to evaluate all possible values of a boolean expression
Practice:
  . 1A, 1C, 1F, 1G, 1J
  (Discussion) 2
  (Discussion) 4
  (SI) 6
  . 1A, 1B, 1D, 1G, 1K
  . 2
  . 4
  (SI) 7
  . 7