

Name: _____

Date: _____

Quiz name: Discrete Math Mar 9 (combinatorics, probability)

Rohun, Elias, and Sophie all want some Scooby Snacks, and I let them come up with their own rules to share a box of 100 of them as long as everybody gets at least one. How many ways for them to share?

- 1.
- (A) 100 choose 3
 - (B) 99 choose 3
 - (C) 99 choose 2
 - (D) 103 choose 3
 - (E) 103 choose 2
 - (F) 101^3
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2. My favorite prime is 163. What is the remainder of $(200 \text{ choose } 150) \bmod 163$?

- (A) 0
 - (B) 150
 - (C) 1
 - (D) 13
 - (E) I need a calculator.
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Suppose I choose a number from the 100th row of Pascal's triangle (the row that begins 1, 100, ...) uniformly at random.

3. Which of these is closest to the probability that my number is less than or equal to 1000?

- (A) .001
- (B) .04
- (C) 0.12
- (D) 0.5
- (E) 0