

**Problem 1: Mac & Cheese**

A certain on-campus eatery is giving away 10 (identical) servings of mac & cheese to 4 hungry Huskies. The division of servings need not be fair; some Huskies might not receive a single serving.<sup>1</sup>

(a) How many ways can the 10 servings of mac & cheese be divided up among the 4 Huskies?

(b) Now suppose each serving of mac & cheese comes with different toppings (bacon, jalapeños, etc.). (So every serving is different.) How many ways can the 10 servings of mac & cheese be divided up among the 4 Huskies?

---

<sup>1</sup>which, with positive probability, leads to an incident similar to the one which occurred at the Student Union on Sunday, October 4, 2015.