Section Syllabus

The full syllabus can be found on the bCourses page. Some details for this section:

(1) **GSI:** Zvi Rosen
zhrosen@math.berkeley.edu
Office: 845 Evans Hall
(2) **Homework** needs to be turned in at the beginning of section on Wednesday. It will be graded out of 2 points. (Lowest two will be dropped.)
(3) **Quizzes** will take place in section on Wednesday, and will be graded out of 5 points. (Lowest two will be dropped.)
(4) **Office Hours:** Monday $3-4$ pm and Thursday $3:45-4:45$ in 845 Evans.
(5) **Participation** in section can help raise a borderline grade.

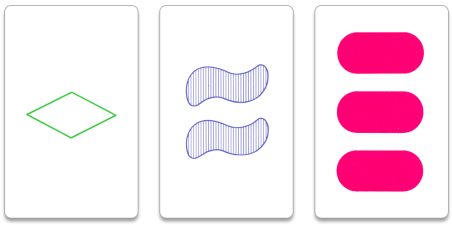
Group worksheet

(1) A T-shirt comes in 3 sizes (S, M, and L) and with a choice of 5 Simpsons characters (Homer, Marge, Bart, Lisa, Maggie).
   (a) How many different T-shirts can I order?
   (b) What if Maggie only comes in Small and Homer only comes in Large?

(2) There are 4 florps and 7 druffs. How many ways are there of choosing 1 florp **and** 1 druff? How about choosing 1 florp **or** 1 druff?

(3) **Fun with Letters:** (In this problem, consider "y" to be a consonant)
   (a) How many 3-letter words are there using letters in the English alphabet?
   (b) How many 3-letter words are there containing **exactly** one vowel?
   (c) How many 3-letter words are there with "a" in the first position, one consonant, and one other non-"a" vowel?

(4) The game Set^{TM} has cards with four traits:
- Color: Red, Green, or Purple
- Shape: Oval, Diamond, or Squiggle
- Texture: Empty, Shaded, or Filled
- Number: 1, 2, or 3



Assuming that there is exactly one card for each potential choice of traits, how many cards are there in the Set^{TM} deck?

(5) A robot walks along a 2×3 grid with vertices labeled $(0,0)$ through $(2,3)$, moving from one vertex to the next by taking one step up or right at a time.
   (a) How many different ways are there for the robot to move from $(0,0)$ to $(2,3)$? [Hint: Use Tree Diagrams]
   (b) What if we have to avoid an enemy robot stationed at $(1,2)$?