# [BASIC PROBABILITY]

(§8.2 worksheet)

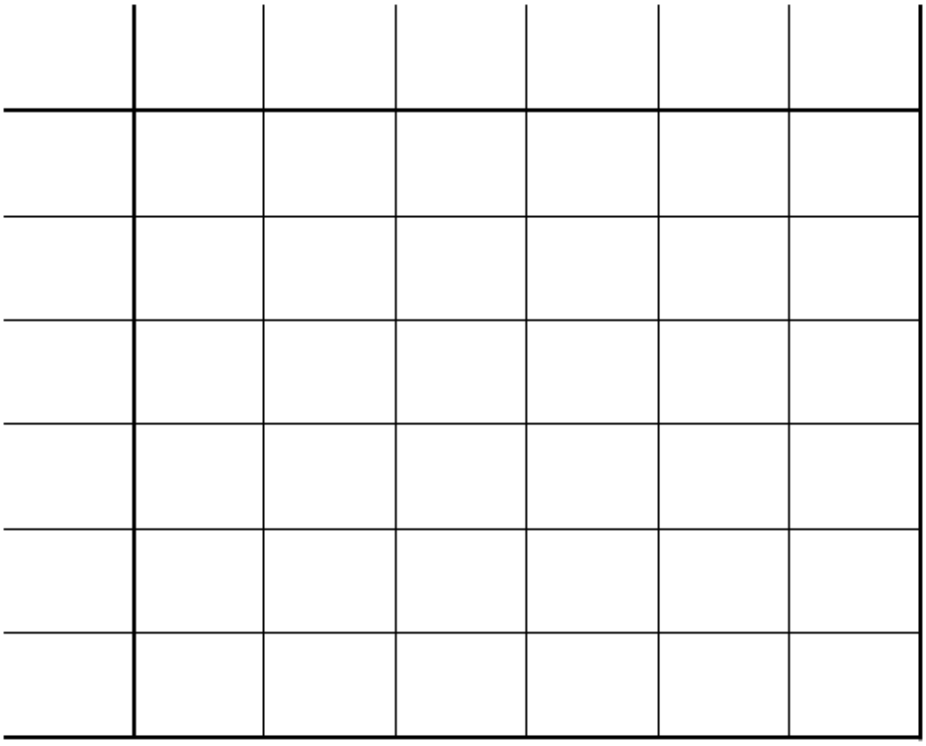
**[1.]** Compute the following probabilities for rolling a dice

i. The probability of rolling a 6.
ii. The probability of rolling a 2 or a 3.
iii. The probability of rolling an odd number.
iv. The probability of rolling a 1, 4, 5, or 6.

**[2.]** Suppose you flip 3 coins with 2 sides each: heads or tails.

i. Find the sample space of flipping 3 coins.
ii. What is the probability of flipping at least 1 heads?
iii. What is the probability of flipping 2 tails and 1 heads?
iv. What is the probability of flipping all tails?

**[3.]** Fill in the sample space for throwing two dice.



**[4.]** Using the sample space, compute the following probabilities.

i. Throwing doubles
ii. Throwing snake eyes
iii. Throwing a sum of 7.
iv. Throwing a sum of 4 or 10
v. Throwing a sum greater than 3
vi. **[4.]** Using the sample space, compute the following probabilities.

**[5.]** Think about the sample space of rolling three tetrahedral (4-sided) dice. $(1, 1, 1)$ would be a possible outcome. So would $(2, 4, 4)$. Is there a way to quickly calculate the size of this sample space? Is there a way to quickly calculate the size of sample space in general?

**[6.]** What is the size of a sample space that occurs when you roll five tetrahedral dice?