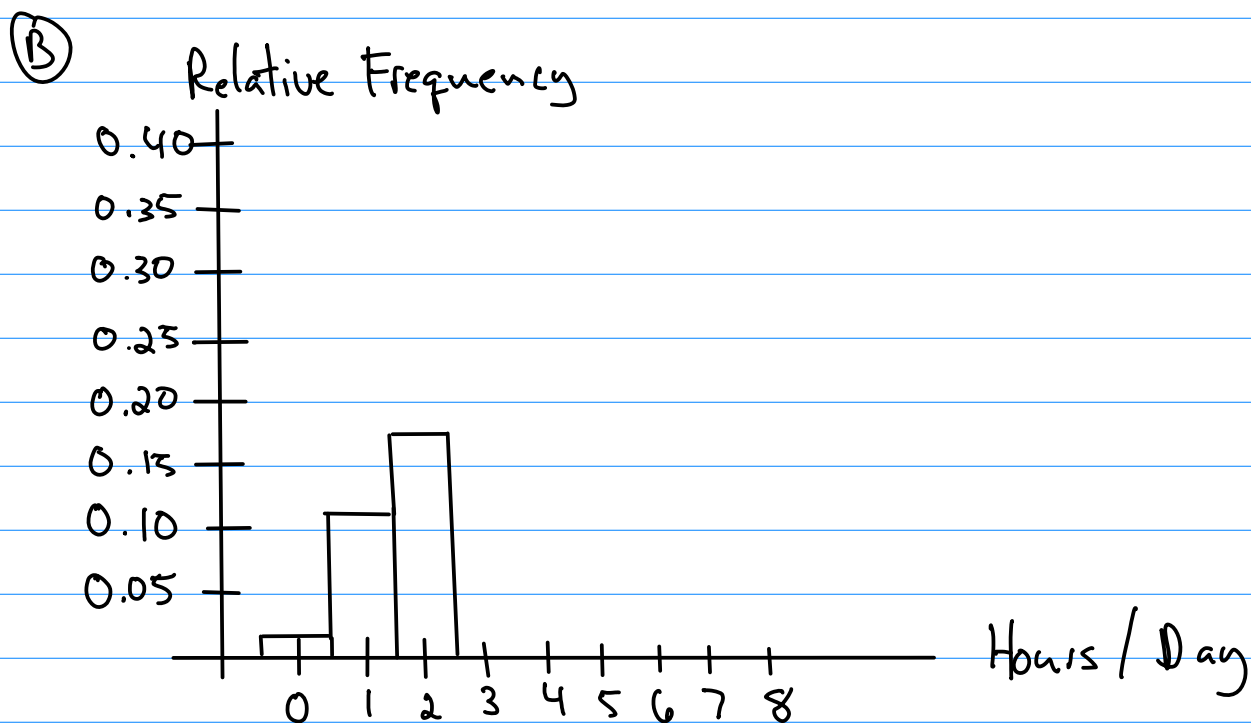


② (A)

Hours/Day	Relative Frequency
0	0.02
1	0.12
2	0.17
3	0.35
4	0.21
5	0.05
6	0.06
7	0.03
8	0.01

$42/120 = 0.35$



Exam 2 No class 2/21.
Exam 2: 2/23.

You are required to bring the required calculator to the exam. No other calculators are permitted.

(1) HW 4: Permutations and combinations
Work through HW 4.

- ② HW5: Basic probability
Know how to do problem #1.
Study problem #2

Write a probability distribution: #3

- ③ HW6: Computing probabilities
Do the problems we discussed in class.

- ④ HW7: Relative frequency distribution (#1A, 2A)
No histogram

$$0.28 = 28\%$$
$$28 = 2800\%$$

Distributions

Ex: A pair of dice are rolled and their sum is recorded.

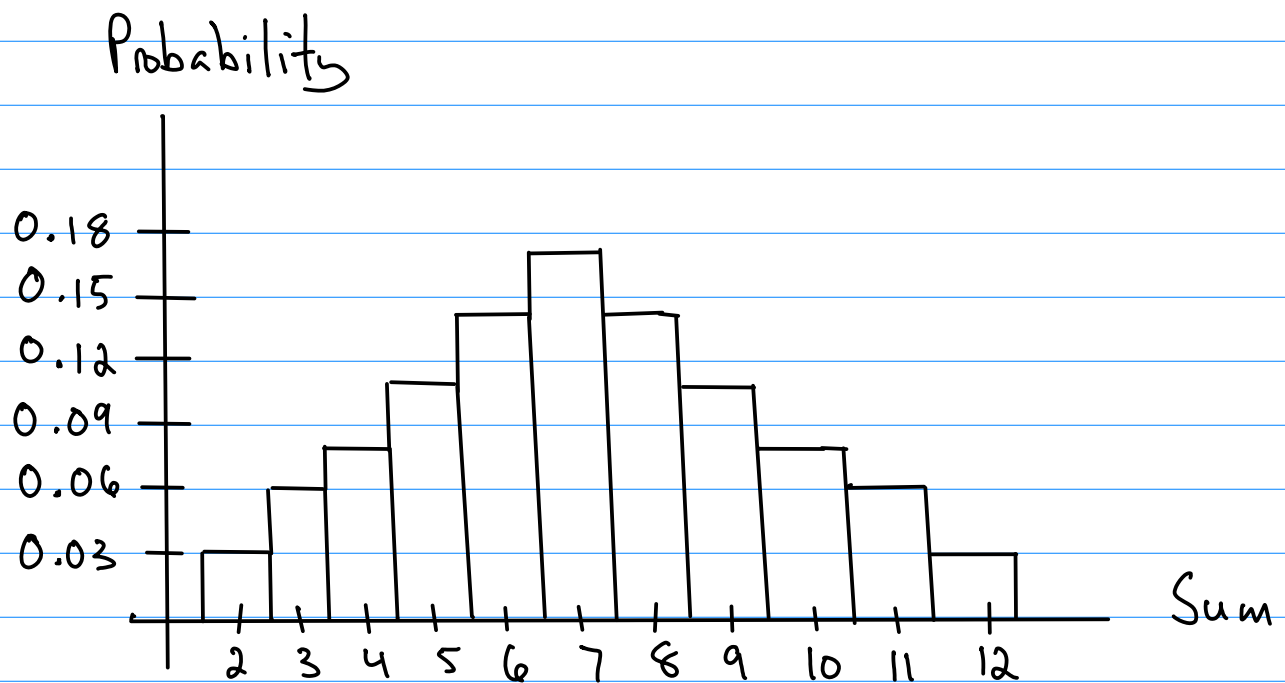
- ① Write the frequency distribution
Suppose one die is red and the other die is green.

Sum	Frequency	← How many
2	1	R1G1
3	2	R1G2, R2G1
4	3	R1G3, R2G2, R3G1
5	4	R1G4, R2G3, R3G2, R4G1
6	5	
7	6	R1G6, R2G5, R3G4, ..., R6G1
8	5	
9	4	
10	3	
11	2	Total # outcomes
12	1	= sum of frequencies
		= 36

Write the probability distribution.

Sum	Probability	
2	0.03	(1/36)
3	0.06	2/36
4	0.08	⋮
5	0.11	⋮
6	0.14	⋮
7	0.17	(6/36)
8	0.14	⋮
9	0.11	⋮
10	0.08	⋮
11	0.06	⋮
12	0.03	⋮

Draw the **probability histogram**.



HW 7: 2/28

The Mean

Ex: Exam scores: 72, 54, 95, 74, 50, 74, 64,
66, 87, 88

The **mean** of the scores is an average.

$$\begin{aligned}\text{Mean} &= \frac{\text{Sum of scores}}{\text{Number of scores}} \\ &= \frac{72 + 54 + 95 + 74 + 50 + 74 + 64 + 66 + 87 + 88}{10} \\ &= \frac{724}{10} = 72\end{aligned}$$

The mean is a **measure of central tendency**.
It measures the position of the center of the data.

Ex: Compute the mean of the following quiz scores.

Score	Frequency
10	6
9	11
8	2
7	8
6	2
5	5
	<hr/>
	34

Data { } How many { } Total number of scores

$$\text{Mean} = \frac{10 \cdot 6 + 9 \cdot 11 + 8 \cdot 2 + 7 \cdot 8 + 6 \cdot 2 + 5 \cdot 5}{34} = 8$$

Ex: Survey results:

Favorite Integer	Relative Frequency
1	0.24
2	0.15
3	0.41
4	0.20

$$\text{Mean} = 1(0.24) + 2(0.15) + 3(0.41) + 4(0.20) = 3$$

2/28: HW8: # 1, 2, 3, 4