Probability distribution for the difference on a pair of dice

Consider the random phenomenon of rolling a pair of dice. We can analyze the difference between the two dice values as a random variable X. (To be precise, we'll take the absolute value of the difference.) The values for this random variable are 0, 1, 2, 3, 4, and 5.

1. Determine the probability for each value of this random variable. Fill these in on the left table below. You might find it useful to use the right table in determining these probabilities.

X	Probability
0	
1	
2	
3	
4	
5	

	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

2. Make a probability histogram for this random variable on the grid below. You will need to choose a scale for the vertical axis.
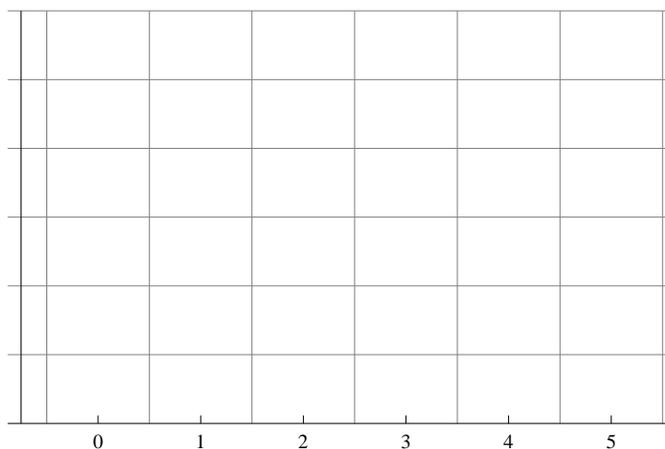
3. Use the probability histogram to *estimate* the mean μ_X and the standard deviation σ_X for this random variable.

4. Compute the mean μ_X and the standard deviation σ_X for this random variable.