

# Dice experiment

## Instructions

- Obtain a 6-sided die. (“Die” is the singular of “dice”.)
- Repeat 3 times:
  - Roll the die 10 times, recording each roll.
  - Determine the total and mean.
  - Make a frequency table.
  - Make a (stacked) dot plot.
- Tell the professor your 3 means. All of the class’s means will be recorded on the tally table.
- Copy the class’s means onto your own tally table.
- Make a histogram of the class’s means.

## Homework







- On the last page, summarize in your own words what we did and what the results were. Also, on the last page, answer the following questions.
  - How many times did you roll a 1?
  - How many times did anyone in the class get a mean of 1?
  - Why is it easier to roll a 1 than to get a mean of 1?
  - If you rolled the die 1000 times and made a dot plot, what shape would you expect? (bell, uniform, bimodal, left-skewed, or right-skewed?)
  - What shape did the histogram of the class’s means have?

Name \_\_\_\_\_

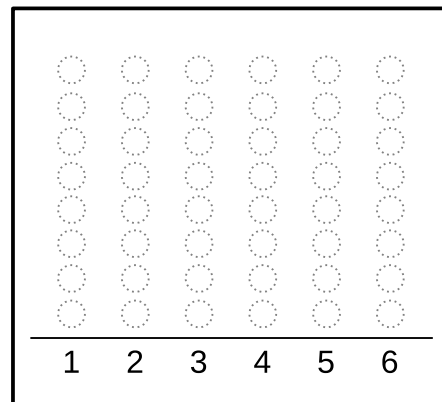
List of each roll

$x_1 =$	$x_6 =$
$x_2 =$	$x_7 =$
$x_3 =$	$x_8 =$
$x_4 =$	$x_9 =$
$x_5 =$	$x_{10} =$

Frequency table

Roll	Frequency
 = 1	
 = 2	
 = 3	
 = 4	
 = 5	
 = 6	

Stacked Dot Plot









$$\text{Total} = \sum_{i=1}^{10} x_i =$$

$$\text{Mean} = \frac{\sum x}{10} =$$

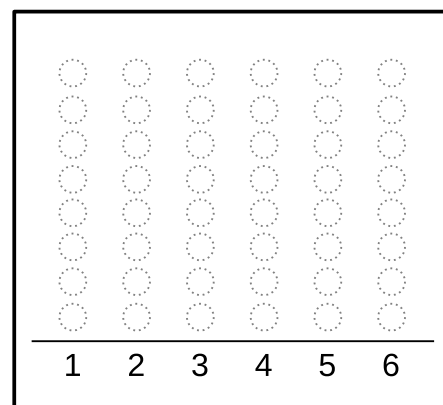
List of each roll

$x_1 =$	$x_6 =$
$x_2 =$	$x_7 =$
$x_3 =$	$x_8 =$
$x_4 =$	$x_9 =$
$x_5 =$	$x_{10} =$

Frequency table

Roll	Frequency
 = 1	
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Stacked Dot Plot









Total =

Mean =

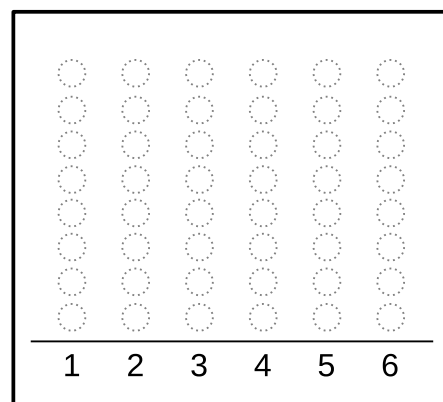
List of each roll

$x_1 =$	$x_6 =$
$x_2 =$	$x_7 =$
$x_3 =$	$x_8 =$
$x_4 =$	$x_9 =$
$x_5 =$	$x_{10} =$

Frequency table

Roll	Frequency
 = 1	
 = 2	
 = 3	
 = 4	
 = 5	
 = 6	

Stacked Dot Plot



Total =

Mean =

**Name** \_\_\_\_\_

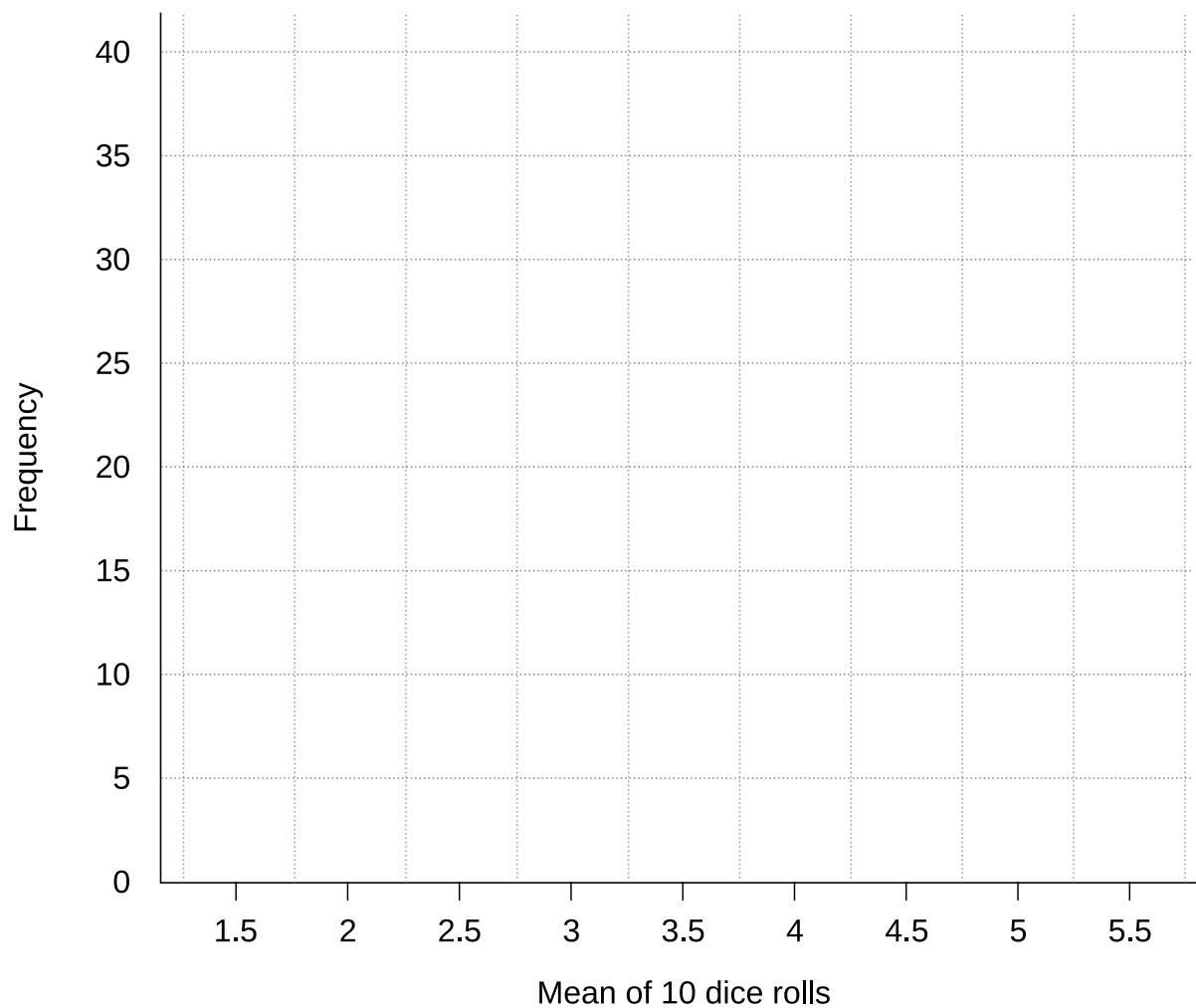
### Tally Table of Class's Means

1.0		2.0		3.0		4.0		5.0	
1.1		2.1		3.1		4.1		5.1	
1.2		2.2		3.2		4.2		5.2	
1.3		2.3		3.3		4.3		5.3	
1.4		2.4		3.4		4.4		5.4	
1.5		2.5		3.5		4.5		5.5	
1.6		2.6		3.6		4.6		5.6	
1.7		2.7		3.7		4.7		5.7	
1.8		2.8		3.8		4.8		5.8	
1.9		2.9		3.9		4.9		5.9	
								6.0	

Bin center	Bin interval	Frequency
1.5	(1.25, 1.75]	
2	(1.75, 2.25]	
2.5	(2.25, 2.75]	
3	(2.75, 3.25]	
3.5	(3.25, 3.75]	
4	(3.75, 4.25]	
4.5	(4.25, 4.75]	
5	(4.75, 5.25]	
5.5	(5.25, 5.75]	

**Name:** \_\_\_\_\_

**Histogram of class's means**



**Name**

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Write your summary and responses here: