**Unit 6**



**Unit 6 - Random Variables**

**Guided Reading**[**Chapter 6 Reading Guide \_1\_.pdf**](https://cobbk12.blackboard.com/bbcswebdav/pid-1327266-dt-content-rid-7168918_2/xid-7168918_2)****

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| --- | --- | --- | --- |
| Date | Topic/Activity/Vidoe | Keeper Notes/ reading assignment for next day | Written Assignment c |
| Monday2/24 |   **6.1 Discrete & Continuous Random Variables*** Use a probability distribution to answer questions about possible values of a random variable.
* Calculate the mean of a discrete random variable.
* Interpret the mean of a random variable in context.
 |   [**6.1  Discrete & Continuous Random Variables**](http://www.hopkins.k12.ky.us/webpages/vbrowning/files/tps4e_ch6_6.1.ppt)**Read pp 339-353& complete guided reading** |  page 3531,5,7,9,13, 14,18,19,23,25 |
| Tues2/25 |   **6.2 Transforming & Combining Random Variables*** Describe the effects of transforming a random variable by adding or subtracting a constant and multiplying or dividing by a constant.
* Find the mean and standard deviation of the sum or difference of independent random variables.
 |   [Keeper 6.2 - Transforming & Combining Random Variables](http://www.hopkins.k12.ky.us/webpages/vbrowning/files/tps4e_ch6_6.2.ppt)Read pp. 358-377 **& complete guided reading** |  39-41,43,45, 49,51,57-59,63 |
| Wed2/26 |   **6.3 Binomial & Geometric Random Variables*** Determine whether the conditions for a binomial random variable are met.
* Compute and interpret probabilities involving binomial distributions.

**Video: Binomial Distributions\_\_\_\_\_** | [Keeper 6.3 - Binomial & Geometric Random Variables](http://www.hopkins.k12.ky.us/webpages/vbrowning/files/tps4e_ch6_6.3.ppt)Read pp.382-389 **& complete guided reading** |  page 40261,65,66,69,71,73,75,77 |
| Thurs2/27 |   **6.3 Binomial & Geometric Random Variables** |   [Keeper 6.3 - Binomial & Geometric Random Variables](http://www.hopkins.k12.ky.us/webpages/vbrowning/files/tps4e_ch6_6.3.ppt)Read pp 390-397 **& complete guided reading** |  page 40279,81,83,85,87,8993,95,97,99,101-103 |
| Friday2/28 |    Review | [Read Chapter Review](http://www.hopkins.k12.ky.us/webpages/vbrowning/files/tps4e_ch1_1.3.ppt)On line Quiz/ Frappy[Chapter 6 Reading Guide \_1\_.pdf](https://cobbk12.blackboard.com/bbcswebdav/pid-1327266-dt-content-rid-7168919_2/xid-7168919_2) Click for more options | page 408-411 Practice TestGuided reading\_\_\_ |
| Monday3/2 |   TEST Unit 6 |   | TEST |
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**STANDARDS**

**Anticipating patterns: Exploring random phenomena using probabilities and simulations**

A. Probability

1. Interpreting probability, including long-run relative frequency interpretations
2. “Law of Large Numbers” concept
3. Addition rule, multiplication rule, conditional probability, and independence
4. Discrete random variables and their probability distributions, including binomial and geometric
5. Simulation of random behavior and probability distributions
6. Mean (expected value) and standard deviation of a random variable and linear transformation of a random variable

B.  Combining independent random variables

1. Notion of independence versus dependence
2. Mean and standard deviation for sums and differences of independent random variables

**IMPORTANT DATES (TENTATIVE)**

10/8 - Quiz 6.1-6.2

10/14 - AP Statistics Practice Test 6

**QUICK NOTES**

[Chapter 6 - Random Variables Quick Notes](https://cobbk12.blackboard.com/bbcswebdav/pid-1327266-dt-content-rid-5609117_2/xid-5609117_2) 

**LESSONS**

**6.1 Discrete & Continuous Random Variables**

* Use a probability distribution to answer questions about possible values of a random variable.
* Calculate the mean of a discrete random variable.
* Interpret the mean of a random variable in context.
* Calculate the standard deviation of a discrete random variable.
* Interpret the standard deviation of a random variable in context.

[**6.1  Discrete & Continuous Random Variables**](http://www.hopkins.k12.ky.us/webpages/vbrowning/files/tps4e_ch6_6.1.ppt)

**HW:  1, 5, 7, 9, 13, 14, 18, 19, 23, 25**

**6.2 Transforming & Combining Random Variables**

* Describe the effects of transforming a random variable by adding or subtracting a constant and multiplying or dividing by a constant.
* Find the mean and standard deviation of the sum or difference of independent random variables.
* Determine whether two random variables are independent.
* Find probabilities involving the sum or difference of independent Normal random variables.

[Keeper 6.2 - Transforming & Combining Random Variables](http://www.hopkins.k12.ky.us/webpages/vbrowning/files/tps4e_ch6_6.2.ppt)

HW:  27-30, 37, 39-41, 43, 45, 49, 51, 57-59, 63

**6.3 Binomial & Geometric Random Variables**

* Determine whether the conditions for a binomial random variable are met.
* Compute and interpret probabilities involving binomial distributions.
* Calculate the mean and standard deviation of a binomial random variable.  Interpret these values in context.
* Find probabilities involving geometric random variables.

[Keeper 6.3 - Binomial & Geometric Random Variables](http://www.hopkins.k12.ky.us/webpages/vbrowning/files/tps4e_ch6_6.3.ppt)

HW: 61, 65, 66, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 93, 95, 97, 99, 101-103