Course Title: Statistics


Provided materials: textbook and calculator (for classroom use)

Instructor: Mrs. Desiree McNeal

Email: find it at www.dorseydons.org

Course Description:
This is an introductory course that focuses on data and statistical reasoning. It is intended for the high school student whose primary technological tool is the TI-73 or TI-84 graphing calculator. This course aims to give students an understanding of the main ideas of statistics and useful skills for working with data.

The following Probability and Statistics Content Standards of California Public Schools are addressed in this course:
1.0 Students know the definition of the notion of independent events and can use the rules for addition, multiplication, and complementation to solve for probabilities of particular events in finite sample spaces. 2.0 Students know the definition of conditional probability and use it to solve for probabilities in finite sample spaces. 3.0 Students demonstrate an understanding of the notion of discrete random variables by using them to solve for the probabilities of outcomes, such as the probability of the occurrence of five heads in 14 coin tosses. 4.0 Students are familiar with the standard distributions (normal, binomial, and exponential) and can use them to solve for events in problems in which the distribution belongs to those families. 5.0 Students determine the mean and the standard deviation of a normally distributed random variable. 6.0 Students know the definitions of the mean, median, and mode of a distribution of data and can compute each in particular situations. 7.0 Students compute the variance and the standard deviation of a distribution of data. 8.0 Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

Chapter One: Getting Started
1. What is Statistics
12 Random Samples
13 Introduction to Experimental Design

Chapter Two: Organizing Data
2.1 Frequency Distributions, Histograms, and Related Topics
2.2 Bar Graphs, Circle Graphs, and Time-Series Graphs
2.3 Stem and Leaf Plots

Chapter Three: Averages and Variation
3.1 Measures of Central Tendency: Mode, Median, and Mean

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3.2 Measures of Variation
3.3 Percentiles and Box-and-Whisker Plots

Chapter Four: Correlation and Regression
4.1 Scatter Diagrams and Linear Correlation
4.2 Linear Regression and the Coefficient of Determination

Chapter Five: Elementary Probability Theory
5.1 What is Probability?
5.2 Some Probability Rules-Compound Events
5.3 Trees and Counting Techniques

Chapter Six: The Binomial Probability Distribution and Related Topics
6.1 Introduction to Random Variables and Probability Distributions
6.2 Binomial Probabilities
6.3 Additional Properties of the Binomial Distribution

Chapter Seven: Normal Curves and Sampling Distributions
7.1 Graphs of Normal Probability Distributions
7.2 Standard Units and Areas Under the Standard Normal Distribution
7.3 Areas Under Any Normal Curve
7.4 Sampling Distributions
7.5 The Central Limit Theorem
7.6 Normal Approximation to the Binomial Distribution

Chapter Eight: Estimation
8.1 Estimating μ When σ Is Known
8.2 Estimating μ When σ Is Unknown
8.3 Estimating p in the Binomial Distribution

Chapter Nine: Hypothesis Testing
9.1 Introduction to Statistical Tests
9.2 Testing the Mean μ
9.3 Testing a Proportion p

Chapter Ten: Inferences About Differences
10.1 Tests Involving Paired Differences
10.2 Inferences About the Difference of Two Means μ₁ − μ₂
10.3 Inferences About the Difference of Two Proportions p₁ − p₂

Chapter Eleven: Additional Topics Using Inferences
11.1 Chi-Square: Tests of Independence
11.2 Chi-Square: Goodness of Fit
11.3 Testing a Single Variance or Standard Deviation
11.4 Inferences for Correlation and Regression

CLASSWORK/HOMEWORK:
All assignments will be posted on: www.dorseydons.org

- 5 Points for each Warm-up Assignment
- 10 Points Each Class work/Homework Assignment
- Include First and Last Name, Period, and Assignment Number.
- Show all work neatly and clearly. Box or circle your answers. You may use a highlighter.
- Class work is due at the END of the period. Pencil Only
- Homework is due the next day at the BEGINNING of the period. Pencil Only
- All work is stamped and graded. Please review all teacher comments
- Points will be taken off for late work.
ASSESSMENTS:
- 20 to 50 Points for Quizzes
- 50 to 100 Points for Chapter Tests
- Pencil Only. Use a highlighter for your final answer.
- Must show work clearly and neatly to receive points on all tests.
- You must make up all tests at lunch time or tutoring.

3-RING BINDER: You are required to keep a neatly organized three-ring binder for this course. You must bring the binder to class EVERY DAY. The binder must contain five dividers labeled as follows:
- Notes / Examples
- Test Prep / CST / CAHSEE
- Class work / Homework
- Quizzes and Tests
- Projects
The first page of your binder must contain this syllabus.

CLASS RULES AND EXPECTATIONS:
- Be on time for class. Unexcused tardiness is not permitted.
- Always be polite. Extend courtesy and aid to those around you. Do not make sarcastic, demeaning, hurtful remarks. Offer constructive criticism in a respectful manner.
- It is your responsibility to make up work after an absence. I will not go to you - it is your responsibility to get your work from the school website or from me.
- Expect daily homework. Take advantage of the time saved on short assignments by reviewing old material.
- There will be a several forms of assessment: quizzes, tests, and projects.
- Extra help is available to anyone. Lunch time and After School in room E8

SUPPLIES:
You must bring the following to class EVERY DAY:
- Regular and color Pencils
- Loose lined paper
- Eraser and Sharpeners
- Calculator – TI 84
- Ruler
- Graph paper
- 3-Ring Binder
- Pencil Sharpener
- Highlighter & Red Pen

GRADE DISTRIBUTION:
Students will receive weekly progress reports. Grades are based on cumulative points earned on assignments, assessments, and projects. The district periodic assessments will be included in your grade. Please take the time to review all grades earned. Students who pass both semesters of Algebra 1 with the grade of “C” or better fulfill one of the “A-G” college admission requirements. If you have questions, please contact the teacher through the school website: www.dorseydons.org

GRADE SCALE

| 90 – 100 % | A |
| 80 – 89 %  | B |
| 70 – 79 %  | C |
| 60 – 69 %  | D |
| 0 – 59 %   | Fail |

Internet Use:
Please use the website: WWW.KHANACADEMY.org for video support of course concepts.
Teacher: Mrs. Desiree’ McNeal     e-mail: find it at  www.dorseydons.or

I read the course outline and syllabus for this class, including the grading policy, class procedures, and supplies needed for class:

_________________________  _____________________________
Parent/Guardian Signature and Date                                Phone Contact (home or mobile)

_________________________  _____________________________
Student Signature and Date                                         Parent e-mail

Parents, please write any comments or ask questions that may help me teach your child more effectively below:


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