

Math – IMP 2

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Course Description: IMP 2 is the beginning of the math sequence at CPA. Students will constantly be asked “how would you figure it out?” as a way of building their mathematical skills and problem solving abilities.

Skill Objectives and Outcomes: Students will:
Develop, test and reject a null hypothesis
Compare statistics for a population
Use similarity and trigonometric ratios
Apply theorems from trigonometry to solve problems
Use algebraic rules to manipulate expressions
Maximize and minimize using linear programming
Use and manipulate non-integer exponents

Course Content:

Is There Really a Difference? - χ^2 Distribution tests

Shadows – Similarity and trigonometry
Do Bees Build it Best? - Polygons, area and diameter
Cookies – Linear programming
All About Alice - Exponents

Grades/Credit: Grades will be based on student’s progress towards understanding the topics for the class. Students are expected to keep a notebook with their assignments, notes and homework. There are five categories of assignments:

Notebooks, including classwork and homework
Notebooks should be single subject spiral bound. All notes, classwork and homeworks are kept in the notebook. Students are expected to keep a log of assignments in the front. Notebooks are collected once a week.

Tests and quizzes
Quizzes are given at random times, about once a week. There will be one or two tests over the course of the unit. There is a cumulative final for each semester.

Journal entries
Journal writes will occur about once a week and will be kept in the notebook, but are graded separately from the classwork and homeworks. This is an opportunity to reflect on classroom practices and what you have learned. The end of unit cover letter and self assessment is part of this grade.

POWs and major presentations
Problems of the week will occur about once a month. Major presentations will be announced as such when assigned.

“Being a student”
This may be thought of as a participation grade. Everyone starts out with a 75/100. You can earn points by answering questions, presenting problems and solutions to the class, helping other classmates and the teacher. You

can lose points by talking while others are addressing the class, being disruptive to other students, eating during class, taking excessively long bathroom breaks and being disrespectful to other students. A basic rubric could be thought of as:

F = Student who is disruptive and off task

D = Student who is off task, personally unproductive

C = Student who is on task, but does not participate with the class

B = Student who frequently participates and presents

A = Student who participates and helps others

Grades will be assigned on a 4 point scale for each of the five categories. The lowest category will be dropped. Grades will be an average of the remaining 4 categories.

Students will receive regular feedback and an opportunity to correct and improve a minimum of once a month.

Instructional Materials: Students are expected to bring a writing implement, preferably pencil, their books and their notebooks to class every day. A single subject 80 page notebook is best for each unit. Notebooks with graph paper are wonderful. Composition books are ok. If a student is in need of any of the items, please contact me.

Suggestions for Additional Work: Opportunities to go above and beyond the basic level of each assignment are nearly always available. Please contact me if you are interested, or have an idea on how to extend the assignment we are working on. Do not wait, last minute extra work at the end of a term is not often possible.

Late Policy: Students are expected to check the website, the unit assignment board, and with the teacher and other classmates to stay current in case of absence.

Major Assignments will be downgraded 10% for each day of lateness and will not be accepted after three days without an excused absence. Extensions for excused absences must be arranged with the teacher immediately upon return.

Tests: Tests are to be made up in an efficient manner. Students are expected to schedule a make up time outside of class within 3 days of their return to school. Tests not made up 2 weeks after testing date may not qualify for full credit.