Math 20: Pre-Algebra
Section #2977
MW 1:15-3:10pm, OC3517
Spring 2015

Hypotrochoid

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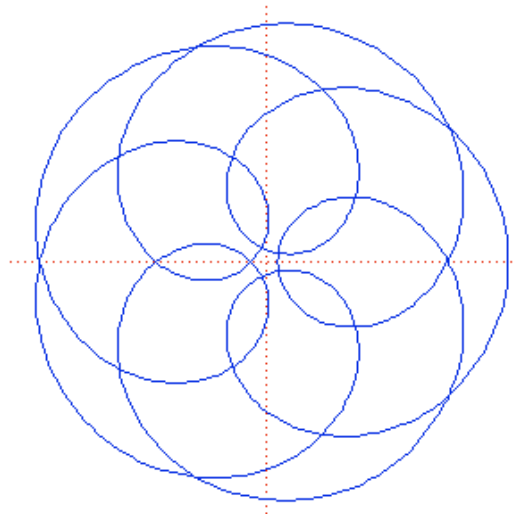
Parametric Cartesian equation:
$$x = (a - b) \cos(t) + c \cos((a/b - 1)t),$$
$$y = (a - b) \sin(t) - c \sin((a/b - 1)t)$$

Course Description: This course is designed to prepare students for Elementary and Intermediate Algebra. Course topics include thorough coverage of signed numbers, fractions and mixed numbers, decimals, square roots, percentages, basic algebra concepts involved with solving linear equations, and solving basic application problems.

Course Objectives: At the end of this course you should be able to (1) Apply the order of operations agreement, the rules of exponents, and the field properties over the real numbers; (2) Simplify arithmetic expressions involving signed numbers; (3) Apply the rules of signed numbers, rules of exponents, binary operations and the distributive property to evaluate algebraic expressions and combine like terms; (4) Derive solutions to linear equations and validate the results; (5) Translate applied problems with ratio, proportion and percent into computational problems and solve; (6) Apply geometric concepts to problem-solving; and (7) Add, subtract and multiply expressions with square roots.

Student Learning Outcomes: (1) Students will be able to apply the rules of signed numbers and rules of exponents to simplify algebraic expressions. (2) Students will be able to verify solutions of linear equations. (3) Students will be able to translate applied problems with ratio and proportion into computational problems involving a variable and solve.

Textbook: *EWA* access code, and McKeague, *Prealgebra, 7th ed.*, Brooks/Cole, 2010, or *ebook* version

Calculators: Although our first three tests are non-calculator tests, I encourage you to make use of a calculator to <u>check</u> your arithmetic on in-class assignments and homework. The Final Exam will be given in two parts: one part is a non-calculator portion, and the other is a calculator portion.

Course Evaluation and Grading: Your course grade will be based on the following:

Participation and Attendance	40 pts	A = 895 - 1000
Homework Assignments	155 pts	B = 790 - 894
Course Engagement Binder	80 pts	C = 700 - 789
Tests	515 pts	D = 550 - 699
Final Exam	210 pts	F = below 549

In addition to homework assignments, there will be 4 tests, and a Final Exam. **THERE ARE NO DROPPED TEST/EXAM/HOMEWORK SCORES** in this course.

If for ANY reason, you must miss class on the day of a test or exam, you MUST make arrangements with me IN ADVANCE for taking the test at some other time. It is your responsibility to make the necessary arrangements **beforehand**. Make-up tests *may* **not** be given for full credit.

<center>********The Final Exam date is Monday, May 18th, starting at 1:00pm.********</center>

In this class we will be learning how to do problems algebraically in a step-by-step fashion. For all tests, points are assigned to steps and notation, as well as to the final answer. Getting the correct answer is only worth a small portion of the total points for a problem. To earn full credit for a problem, you must show all steps, use correct algebra and notation, and arrive at the correct answer.

If you make mistakes on a test, it is likely that you will be asked to submit test corrections. If you fail to submit your test corrections, a zero will be posted for your test score.

Participation and Attendance: In order to get the most out of this course, plan to attend each class regularly, arrive on time, and stay for the entire period. Since attendance is mandatory, you will be dropped after the fourth absence. Re-enrollment (*which may occur once*) is possible, but you must discuss it with me first. Again, attendance is your responsibility as are its consequences. .

It is your obligation, as well as your responsibility, to participate in class discussions and in-class assignments. I encourage everyone to be active learners; this means you ask questions in class whenever you do not understand something. In addition, I am available for individual assistance during my scheduled office hours, or by appointment. I advise you to get to know your classmates and to work in groups, if possible. PLEASE NOTE: 40 points of the final grade is determined by classroom participation and attendance. I will take the following issues into consideration:

- Your ability to answer questions on assigned readings
- Your ability to successfully work in small groups
- Your ability to offer insight to questions asked by fellow classmates
- Your ability to be on time to class
- Your ability to leave food or drinks outside the classroom
- Your ability to submit assignments on time
- Your ability to focus on mathematics while in class, and to refrain from talking to your neighbors when I am lecturing, —for some students the noise is distracting and disruptive
- Your ability to maintain a positive and supportive attitude, —being sensitive to the feelings of others, and avoiding criticism, teasing, or joking that might be hurtful

School Holidays: January 19th, February 13th– 16th, and March 16th – 21st (Spring Break).

Course Engagement Binder: You will be asked to maintain a *three-ring* **Course Engagement Binder** with class notes and *Lecture Notes*. This binder will be submitted and checked for coursework progress on a **per chapter** basis. You will need to download and print the *Lecture Notes* for each chapter from the following web address:

In addition to watching course videos, *BEFORE YOU COME TO CLASS*, you should read and attempt the problems in the *Lecture Notes* for each section. These materials are an outline of what we will be doing during class. The main purpose of this **Course Engagement Binder** is to keep you on pace for the course, promote communication, and to help us identify any topics where assistance/intervention might be needed. Furthermore, the definitions, activities, and problems that you encounter in the *Lecture Notes* will be directly related to test questions.

80 points of your total course grade will be based on the **Course Engagement Binder** contents. Each time you submit your binder for a **chapter** check, you will receive a score out of TEN points. This score will be based on your mathematical progress towards **completion** of the *Lecture Notes*.

Homework: There are three components of homework assignments for this course that will be required for submission on a regular basis. First, for 70 points, you will be asked to complete homework questions via EWA (*Enhanced WebAssign*), a course and textbook management system that you will need to purchase access to within the first two weeks of this course. While you will be submitting your answers to the questions assigned via EWA online, you will be asked to complete the questions, showing your work on paper, and submit this work with a regular assignment. Second, for 50 points, you will be asked to complete homework sets consisting of questions that are from problem sets in each section of our textbook. Third, for 35 points, you will be asked to complete questions from relevant course materials, *(mostly Chapter Review documents)*, that are posted on my Math 20 Resources webpage.

I expect assignments to be <u>legible</u>, <u>neatly</u> <u>organized</u>, and <u>worked using 3 colors</u>. (I will explain this in class). Although the majority of our class time will be spent on completing the *Lecture Notes*, some homework problems will be discussed during class, especially those that may have caused you particular difficulty. PLEASE NOTE: 155 points of your final grade is based on your homework scores. <u>Late homework</u> will not be accepted.

Success in this Course: Mathematics is a "learn by doing" subject. A good rule is to set aside eight to twelve hours per week to do your homework assignments and to complete other study and learning tasks. These tasks include: reading the text, watching course videos, printing out and working on the *Lecture Notes* outside of class, completing online homework via EWA, completing homework from the text, participating in supplemental learning workshops, making outlines or 3x5 cards, memorizing formulas, rules or processes, and getting help from your instructor, from peers, from tutors in the Math Learning Center (MLC), or from tutors in the Tutoring & Academic Support Center (TASC).

<u>Do not allow yourself to fall behind in your work.</u> Catching up before a test is an extremely difficult task.

You will need the regular use of a computer with Internet access, an access code for EWA, and a copy of our course text.

In preparation for a given test, at a minimum, you should complete all homework and any review or supplementary handouts. I recommend that you review the sections and homework, and then complete the appropriate Chapter Review (these are posted on my website) with your book closed, showing steps and using algebra, and working under a two-hour time constraint. If you need to refer to the text when completing a problem, redo it until you can complete it correctly without

reference. Then, redo it again at a later date to be sure that you remember it. In order to assure that you are properly prepared for a test, you should practice in an environment as close as possible to the testing environment: using no references, write out all problems and solve them showing all steps and using algebra, and work under a two-hour time constraint.

Office Hours: My office hours are meant for <u>you</u>. If your schedule conflicts with mine, see me in class to make an appointment. I will hold the following scheduled office hours:

Mondays & Wednesdays: 10:40-11:10am & 5:15-5:45pm

Facilitated Learning Sessions/Extra-Credit: Associated with this course is a Facilitated Learning Session (FLS) composed of students in this class. Your Facilitated Learning Session will be lead by a student who is outstanding in teaching ability and knowledge of this course. Prior to each test, if you participate in two Facilitated Learning Session meetings, you may receive a 4 percentage-point extra credit per test. Prior to each test, if you participate in one Facilitated Learning Session meeting, you may receive a 2 percentage-point extra credit per test. PLEASE NOTE: Extra-Credit points can only be applied to test grades of C (70.0%), or better.

Accommodation of Disability: Students with verified disabilities who need academic accommodations should discuss options with me during the first two weeks of class. Please contact me and/or the Disabled Students Program and Services (DSP&S) Office for further information.

Academic Integrity and Standards of Student Conduct: This class will be conducted in accordance with widely accepted standards of academic honesty, as well as standards of student conduct supported by MiraCosta College's *Academic Standards & Policies* that are stated in the course catalog. In addition to disruptive behavior, harassment, or willful disobedience, cheating, plagiarism, or other forms of academic dishonesty are not acceptable and will not be tolerated. Students are expected to conduct themselves in an ethical manner that promotes a safe and harmonious learning environment while on the campus. Charges of misconduct and disciplinary sanctions may be imposed upon those who violate these standards of conduct, or provisions of college regulations.

*** Mobile Phone and Personal Electronics Use Policy ***:

- If you carry a mobile phone and/ or personal electronics, turn it/them **OFF**, or set it/them to "Vibrating Mode" while in class.
- Disrupting the learning environment with use of mobile phone and/or personal electronics can lead to being dropped from the class.

Drops: If you decide to drop the course, use SURF to drop yourself. <u>Don't wait for me to drop you automatically</u>. Withdraw W's will be issued between January 31st and April 23rd. If I drop you and you want to be reinstated, see me quickly.

I look forward to getting to know each of you. Good luck, enjoy the course, and have a great semester!