

THURSDAY 3/22 CIRCLES **Text: Algebra 2, Glencoe Mathematics**

OBJECTIVE

* Write equations of circles

CLASSWORK

- #1
- #2
- #3

Written on board during class (*See AGENDA below*)

HOMEWORK

- Worksheet P467 (*attached*)

LAST HOMEWORK

- Review READ/NOTES Ch8.3 (*Text's material on circles*)
- Text P428 #1 (*A simple Circle problem*)

All of the above is written on the board before the students enter the room, and remains for the duration of the class. The below is my Agenda for the class:

AGENDA

11:50

- “Big Picture” and 3 dimensional conics overheads

12:00

- Physical Conics Sections model (*This homemade model can be taken apart to show how a double cone cut by a plane generates parabolas, circles, ellipses, and hyperbolas.*)

12:05

- Lecture #1 (*see attached Slide 1 and 2*)
- Classwork #1 “What is the equation of a circle around the origin of radius 5?”

12:15

- Lecture #2 (*see attached Slide 3*)
- Classwork #2 “Write an equation of a curve with radius 6 and center (8,-3)”

12:25

- Lecture #3 (*see attached Slide 4 and 5*)
- Classwork #3 “Give the circle whose diameter has endpoints (-4,5) and (6,-3)”

12:35

- Exit problem (*see attached*)

COMMENTS ON THIS CLASS:

1. The “Big Picture” portion was successful in that there was perfect silence and complete attention. This was excellent because the lights were out which can lead to sleep/inattention. The “Big Picture” placed conics, (e.g. the curves circles, ellipses, parabolas, and hyperbolas) within the context of every curve they have studied so far (e.g. lines, quadratics, and higher order polynomials). The “3D Conics” Slide shows a physical interpretation of how circles, parabolas, ellipses, and hyperbolas can be generated from two “cones” (along with the trivial cases of a point and straight lines). This is where the term “conics” comes from.
2. The class became increasingly noisy beginning after second Lecture.
3. Only two of the 27 students could not do the exit problem completely correctly. Those two did it partially.

WHAT WOULD I CHANGE?

I would give them Classwork #2 without revealing the rest of the homework. As it was, Classwork #2 was part of the homework sheet, and my mentor teacher’s opinion was that the noise began when they became frustrated trying to do the advanced problems instead of listening to Lecture 3 which would have taught them how to do the advanced problems.