



MAC1140

Pre-Calculus Algebra

Mid – Term Examination Topic Outline

1. Solve exponential equations.
2. Use the definition of the logarithm to change from logarithm form to exponential form and back.
3. Simplify logarithmic expressions.
4. Rewrite logarithmic expressions utilizing logarithmic properties to expand/condense.
5. Use the change of base to find approximations.
6. Graph logarithmic & exponential functions.
7. Solve exponential & logarithmic equations & inequalities and associated applications.

8. Identify a given conic as a circle, parabola, ellipse, or hyperbola.
9. Find the location of the radius, center, vertices, and foci, as applicable for a given conic.
10. Write a given conic in standard form [appropriate to the conic it is].
11. Calculate the eccentricity of a given conic.
12. Find the equation of a conic with center at the origin from given information.
13. Sketch the graph of a given conic; label all pertinent values on the graph.
14. Sketch the graph of a given parametric function.
15. Find the rectangular form for a given parametric function.
16. Find a parametric representation for a given expression.
17. Solve applications involving conic sections or parametric functions.

18. Solve a system of equations [graphically or analytically].
19. Write the augmented matrix of a given system.
20. Write the system of equations for a given augmented matrix.
21. Solve a system of equations by elementary row operations.
22. Perform requested operations on a given matrix, if possible.
23. Find the Determinant of a given matrix.
24. Solve a system of equations by Cramer's Rule.
25. Find the inverse of a matrix.
26. Identify the coefficient, variable, and constant matrices of a given system.
27. Solve a system of equations by using inverse matrices.
28. Solve a system of inequalities and linear programming applications
29. Find the partial fraction decomposition of a given expression.
30. Determine if a given decomposition is correct.

31. Solve associated applications

Chapter Review Questions:

Ch. 5	p. 387	Review 1 – 87;	Test 1 – 15
Ch. 6	p. 432	Review 1 – 62;	Test 1 – 14
Ch. 7	p. 522	Review 1 – 27, 29– 87;	Test 1 – 7c, 8 – 12

And study your Take-home & On-line Quizzes