



MAT1033 Intermediate Algebra Final Exam Topic Outline

1. Determine if a given ordered pair satisfies a given equation
2. Sketch the graph of a given linear equation
3. Sketch the graph of a given equation by finding intercepts or selecting values of x , then solving for y
4. Find the slope of a line (includes horizontal, vertical, parallel, and perpendicular)
5. Find the equation of a line (this includes given 2 points, a point & a slope; give answers in slope-intercept form)
6. Sketch the graph of equation from problems like those in #4 & #5 above
7. Determine if a given relation is a function (vertical line test)
8. Find the domain & range of a given relation
9. Simplify a given expression using function notation
10. Solve related applications

11. Determine if a given ordered pair is a solution to a system of equations
12. Solve a given system of equations [this can be done by graphing, substitution or addition/elimination]
13. Given the supply and demand equations, find the equilibrium point
14. Given the revenue, cost and/or profit functions, find the break-even point
15. Solve related applications

16. Find unions & intersections of given sets
17. Solve a given inequality [this includes graphing and writing answer in interval notation]
18. Find intersections, unions of given inequalities and simplify compound inequalities [this includes graphing and writing answer in interval notation]
19. Graph a system of linear inequalities
20. Solve related applications

21. Add, Subtract, Multiply and/or Divide polynomial expressions
22. Carry out the operations in function notation
23. Solve related applications

24. Factor expressions completely (including differences of two squares & sum/differences of cubes)
25. Solve equations/applications by factoring

26. Simplify rational expressions (add, subtract); includes simplifying complex fractions
27. Sketch the graph of basic rational functions
28. Solve applications involving rational expressions
29. Simplify radical & rational expressions
30. Convert between radical form & rational exponents



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31. Add/subtract and/or multiply/divide radical expressions
32. Rationalize denominators & numerators
33. Solve radical equations & equations w/rational exponents
34. Simplify complex number expressions
35. Add/subtract and/or multiply/divide complex numbers, including rationalizing denominators
36. Solve related applications

37. Find the value needed to complete the square of a given expression
38. Solve quadratic equations by the square root property or completing the square

Chapter Reviews & Tests:

p. 114 Ch. 2	33 – 65; 85 – 90, 92 – 96	Ch. 2 Test 1 – 6, 11 - 27
p. 197 Ch. 3	7 – 98 (eoo); 101 – 122, 125	Ch. 3 Test 1 – 26, 28 - 30
p. 253 Ch. 4	1 – 6, 15 – 19, 22, 39 – 46	Ch. 4 Test 1 – 4, 11 – 13, 15
p. 335 Ch. 5	79 – 156 (eoo)	Ch. 5 Test 9 - 29
p. 409 Ch. 6	12 – 82 (eoo), 85 – 109 (eoo)	Ch. 6 Test 1 – 27,
p. 475 Ch. 7	1 – 159 (eoo)	Ch. 7 Test 1 – 33
p. 539 Ch. 8	1 – 8	Ch. 8 Test 1 – 12

And study your Take-Home and In-Class/On-line Quizzes (as applicable)

eoo – every other odd