



**MAT1033 Intermediate Algebra
Mid-Term Exam Topic Outline**

1. Find unions & intersections of given sets
2. Solve a given inequality [this includes graphing and writing answer in interval notation]
3. Find intersections, unions of given inequalities and simplify compound inequalities [this includes graphing and writing answer in interval notation]
4. Solve related applications

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

15. Determine if a given ordered pair is a solution to a system of equations
16. Solve a given system of equations [this can be done by graphing, substitution or addition/elimination]
17. Graph a system of linear inequalities
18. Given the supply and demand equations, find the equilibrium point
19. Given the revenue, cost and/or profit functions, find the break-even point
20. Solve related applications

21. Factor trinomial expressions $ax^2 + bx + c$, a equal to any integer, completely
22. Factor sums of squares, sums/differences of cubes, perfect square trinomials completely
23. Factor polynomials completely
24. Solve equations by factoring
25. Solve related applications

Chapter Reviews & Tests:

Review	Ch. 2	p. 114	33 – 40, 47 – 65	Test	p. 116	11 – 22
Review	Ch. 3	p. 197	7 – 98, 105 – 122, 125 – 126 eoo*	Test	p. 202	2 – 26
Review	Ch. 4	p. 253	1 – 6, 15 – 24, 39 – 50 eoo*	Test	p. 256	3 – 4, 7, 11 – 13, 15
Review	Ch. 5	p. 335	77 – 142, 147 – 156 eoo*	Test	p. 338	15 – 29

And study your Take-Home Tests & On-line Quizzes