

## Math 20-2 Midterm Exam Study Sheet

You will be given the following on a formula sheet:

- quadratic formula
- area of a triangle, rectangle, parallelogram, trapezoid
- surface area and volume of a rectangular prism, general prism, right cylinder, right pyramid, right cone and sphere

### Part A – Multiple Choice & Numeric Response (24 marks)

#### Radicals

- MC 1. changing radicals (mixed to entire or entire to mixed – square and cube roots)
- NR 1.** ordering radicals
- MC 2. rationalizing and simplifying radicals
- MC 3. multiplying and simplifying radicals
- MC 4. radical equations
- MC 5. radical equations
- MC 6. radical equations
- NR 2.** radical equations
- NR 3.** simplifying radicals

Radical equations – solving,  
restrictions and verifying

#### Quadratic Functions

- MC 7. finding vertex from an equation
- MC 8. domain and/or range
- MC 9. given an equation identify the correct graph
- MC 10. find the axis of symmetry
- NR 4.** find the x-intercepts from an equation
- MC 11. write a quadratic equation from a word problem
- MC 12. identify the characteristics of a quadratic equation (x-intercepts, y-intercept, axis of symmetry, vertex, max/min)
- MC 13. solve a quadratic equation using factoring
- MC 14. solve a quadratic equation using the quadratic formula
- MC 15. given a graph write the quadratic equation it represents

#### Logic and Reasoning

- MC 16. writing a conjecture
- MC 17. finding a counterexample
- MC 18. logical reasoning
- MC 19. identify a correct proof
- MC 20. solve a logic puzzle

**Part B – Alternate Response (9 marks)**

1. 2 marks
  - writing conjectures and counterexamples
2. 3 marks
  - solve using inductive and deductive reasoning
3. 4 marks
  - continue a pattern

**Part C – Written Response (7 marks)**

1. 3 marks
  - solve a radical equation
2. 4 marks
  - solve a quadratic word problem

**Total marks on exam: 40**

**Time: 3 hours**