

## Math 1040-04 Final Exam Review **Part II**

Things to know: (continued from part I)

- finding the probabilities of events
- probability of the complement of an event (memorize)
- probability of A and B; A then B; B given that A has occurred; A or B (memorize these) (see pg 144)
- Fundamental Counting Principle (memorize how this is used)
- permutations, combinations (formulas on pages 151-154 but not detailed explanations provided)
- constructing a discrete probability distribution given a frequency distribution
- mean (expected value) of a discrete random variable (formula provided)
- identifying  $n$ ,  $p$ ,  $q$ , and  $x$  for a binomial experiment (box on pg 184 provided)
- find probability of  $x$  successes in a binomial experiment (formula pg 186 provided)
- mean and standard deviation of a binomial distribution (formulas pg 192 provided)
- properties of a normal distribution (p216)
- definition (not properties) of the standard normal distribution (pg 219)
- for normal distributions, given a value, find the probability (formula for z-score provided)
- for normal distributions, given a probability, find the value (formula on p239 provided)
- find the mean and standard deviation of sampling distributions (Central Limit Theorem pg 248 provided)
- find probabilities of sampling distributions (z-score pg 251 provided)
- find confidence intervals for the mean (formula pg 282 provided)
- hypothesis testing for proportions using rejection regions (formula pg 374 provided)
- testing the difference between means, small samples, independent (2-sample t test formulas (pg 416), flow chart pg 417 provided)

Practice problems: (not to turn in) (continued from part I)

- 3.1: 21,23,29,31
- 3.2: 11ab,17,19abc,23
- 3.3: 17,18,19c
- 3.4: 6,7,13,15,19,25
- 4.1: 27ab,35ad
- 4.2: 11,13,15
- 5.1: 2-5
- 5.2: 7,9,11
- 5.3: 39,45,48
- 5.4: 3,15,23
- 6.1: 33
- 7.4: 11
- 8.2: 11,13,15,17