

Strayer University — Manassas Campus
Quantitative Methods — MAT540

Midterm Exam

This is a take-home (open Text, class-notes & Student Guide) midterm exam. Read carefully the entire exam before attempting to solve any of the problems and then budget your time: do first what you know best. *Show and submit all your work to justify your answers*; wherever appropriate, identify the given data, the applicable formulae, substitutions and results. Neither collaboration nor use of materials other than the text, class notes or the student guide is permitted; give proper credit to any source or shortcut you may use. By submitting the exam by the **deadline, Saturday, 10/29/05 9:00 PM**, you affirm that you have abided by these rules:

.....
Student's name

Work through the problems in the following pages and answer all questions.

#	Pts.	Score	Instructor's comment
1	10		
2	10		
3	10		
4	10		
5	10		
6	15		
7	15		
8	5		
9	15		

Good luck!

(And, may you need none at all!)

-- Attach (staple) this sheet as a cover of your answer sheets. --

Problem 1. (10 points)

Chapter 1, problem 18 (.24). However, use that frozen pizzas cost \$3.65, and the sale price is decided to be an even \$9.00. Also, in part c, the manager lowers the price to an even \$8.00.

Problem 2. (10 points)

Chapter 1, problem 22 (p.25). However, in the second part of the problem, change the constraint into $4x + 3y = 120$.

Problem 3. (10 points)

Chapter 2, problem 8 (p.58). Identify the probability distribution, the variable(s) and parameter(s), and explain your reasoning.

Problem 4. (10 points)

Chapter 2, problem 14 (p.59). However, use that the north district contains 30% of students, and the central and the south districts both contain 35% of the students.

Problem 5. (10 points)

Chapter 2, problem 24 (p.61). However, use that the mean is $\mu = 550$ hours, with a standard deviation of $\sigma = 75$ hours.

Problem 6. (15 points)

Chapter 3, problem 6 (p.103). However, for part a, determine the decision based on minimum regret, in part b, the decision based on the Hurwiz criterion with $\alpha = 0.3$, and in part c, use the Laplace criterion.

Problem 7. (15 points)

Chapter 3, problem 18 (p.108).

Problem 8. (5 points)

Chapter 4, problem 2 (p.160). However, in the second part of the problem, change the constraint into $4x + 3y = 120$.

Problem 9. (15 points)

Chapter 5, problem 6 (p.219). In addition, for part d, use the linear trend line to predict the August gasoline demand.