12/7/2005

Final Exam
Friday Dec 16
12:30 - 2:30
PH 112

Last day of class Monday Dec 12

Test 4 Linear Programming
Friday Dec 9

If no school on Friday then Test is Monday Dec 12
Final Exam
33 questions - multiple choice
7-9 questions from each text.

Probability
- Simple
- Odds
- Expectation
- Tree diagrams
- OR, AND
- \( P(A) = \frac{\text{Number of favorable outcomes}}{\text{Total number of outcomes}} \)
- Counting principles

Statistics
- mean
- median
- mode
- weighted average
- range
- standard deviation

\[ z = \frac{x - \mu}{\sigma} \]

Finance
- Simple interest: \( I = Prt \)
- Compound interest: I give formula.
- APR: \( \text{FinCh} \times \frac{\text{FinCh} - 1}{100} \)

Charge cards
- Mortgages
- Linear Programming
T1  T2  T3  T4  Final

\[
\frac{\text{Sum}}{5}
\]
Test 4

→ Graph a line
   Solve for y

→ Graph inequality

→ 3) Solve a system
   Like 79 or 40

→ System of linear inequalities
   Find corner pts.

→ Given objective func. + Constraints
   You solve the problem

→ Given 2 word problems
   You write objective func.
   Constraints
   Stop dont solve!
Maximize: \( P = 35x + 50y \)

Subject to:
1. \( x \geq 2y \)
2. \( x + y \leq 24 \)
3. \( y \geq 4 \)
4. \( x \geq 0 \)

Graphically solving the constraints: Shade below the line for \( x \geq 2y \), \( x + y \leq 24 \), \( y \geq 4 \), and \( x \geq 0 \). The feasible region is the area where all these conditions are satisfied. Shade below the feasible region.
\[ Y = 4 \]
\[ X + Y = 24 \]
\[ X - 24 \]

Corner Points:
- (8, 4) \[ p = 35(8) + 50(4) = 280 + 200 = 480 \]
- (20, 4) \[ p = 35(20) + 50(4) = 700 + 200 = 900 \]
- (16, 8) \[ p = 35(16) + 50(8) = 560 + 400 = 960 \]

Max Profit = 9, 60