

## MATH 109 Readiness Check

This review comprises those aspects of mathematics that are important for doing Math 109 (Finite Mathematics). For many students, the following exercises will be relatively easy, however, if you find them difficult, you should probably consider taking Math 072 or 073 or 135 before you.

- 1.3(0)6(7)-4/co ya)  $y = 2x + 3$
- b)  $y = -\frac{1}{2}x - 1$
  - c)  $2x + 3y = 6$
  - d)  $3x - 5y = 10$
2. Graph the following inequalities
- a)  $4$
  - b)  $2x -$
3. Simplify completely
- a)
  - b)
  - c)
  - d) -
4. Solve the following equations
- a)  $2x - 3(1-x) = 7$
  - b)  $-x = x$
5. Combinatorics
- a) Write out all possible arrangements of ABC
  - b) Write out all possible two letter arrangements of ABCD
  - c) Write out all possible two letter subsets of ABCDE
6. Calculation (on a Sharp EL-531 or any scientific calculator) 25

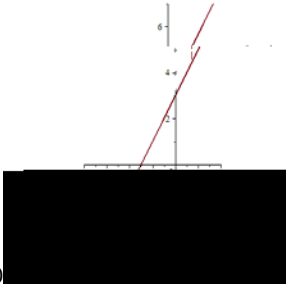
b)  $1500\left(1 + \frac{.0425}{12}\right)^{86}$

c)  $10!$

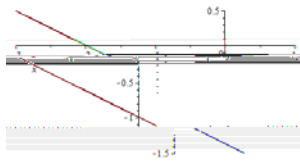
d)  $10!/7!$

# ANSWERS

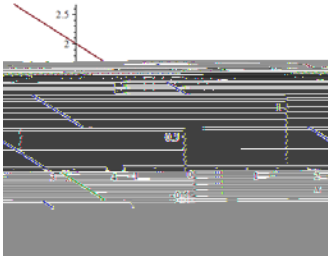
1. a



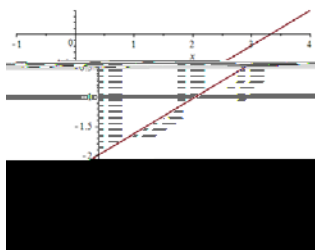
b



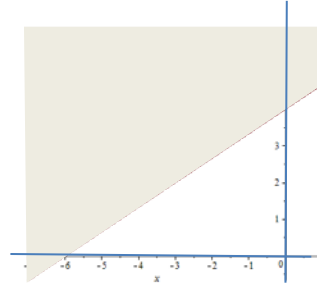
c



d



2. a



b



3. a)  $8/15$   
 b)  $1/4$   
 c)  $3/2$   
 d)  $-11/40$

4. a)  $x = 2$   
 b)  $x = 3/8$

5. a) ABC, ACB, BAC, BCA, CAB, CBA

- b) AB, AC, AD, BA, BC, BD, CA, CB, CD, DA, DB, DC

- c) AB, AC, AD, AE, BC, BD, BE, CD, CE, DE

6. a) 1.091276  
 b) 1703.5935  
 c) 3628800  
 d) 720