MAC 1140 SUMMER 2017
Each topic covered in MAC1140 is listed below. Along with each topic is the a homework list to use with MML and a list to use with the text.
Here is an example on how to read this list.
Under Chapter 1, topic "Solve quadratic equations in the complex number system" you will find MML HW 32(1.3.55). This tells you problem 32 in the Section *.* Practice/Homework on MML is coded 1.3.55, which means it comes from section 1.3 problem number 55 in the text. The corresponding problem is in the text and can be found under Text p.112 #55.

Review

R.5 Factoring Polynomials:
Completing the Square:
        MML HW 1(R.5.73), 2(R.5.75), 3(R.5.77)
        Text p.57 #73-77 odd

Chapter 1: Equations and Inequalities

1.3 Complex Numbers; Quadratic Equations in the Complex Number System:
Are You Prepared:
        MML HW 1(1.3.1), 2(1.3.2), 3(1.3.3)
        Text p.111 #1-3
Concepts and Vocabulary:
        MML HW 4(1.3.4), 5(1.3.5), 6(1.3.6), 7(1.3.7), 8(1.3.8), 9(1.3.9), 10(1.3.10)
        Text p.111 #4-10
Add, subtract, multiply, and divide complex numbers: p.111-112 #11-53 odd, 83, 85
        MML HW 11(1.3.11), 12(1.3.5), 13(1.3.15), 14(1.3.17), 15(1.3.19), 16(1.3.21), 17(1.3.23), 18(1.3.25), 19(1.3.27),20(1.3.29), 21(1.3.31), 22(1.3.33), 23(1.3.35), 24(1.3.37), 25(1.3.39), 26(1.3.41), 27(1.3.43), 28(1.3.45), 29(1.3.47), 30(1.3.51), 31(1.3.53), , 45(1.3.83), 46(1.3.85)
        Text p.111-112 #11-53 odd, 83, 85
Solve quadratic equations in the complex number system:
        MML HW 32(1.3.55), 33(1.3.59), 34(1.3.61), 35(1.3.63), 36(1.3.65), 37(1.3.67), 38(1.3.69), 39(1.3.71), 40(1.3.73)
        Text p.112 #55-73 odd
Determine the character of solutions of a quadratic equation:
        MML HW 41(1.3.75), 42(1.3.77), 43(1.3.79), 44(1.3.81)
        Text p.112 #75-81 odd
Solve applications involving operations on complex numbers:
        MML HW 47(1.3.87)
        Text p.112 #87

Chapter 4: Linear and Quadratic Functions

4.3 Quadratic Functions and Their Properties:
Are You Prepared:
        MML HW 1(4.3.1), 2(4.3.2), 3(4.3.3), 4(4.3.4)
        p.299 #1-4
Concepts and Vocabulary:
        MML HW 5(4.3.5), 6(4.3.6), 7(4.3.7), 8(4.3.8), 9(4.3.9), 10(4.3.10), 11(4.3.11), 12(4.3.12)
        p.299 #5-12
Graph a quadratic function using transformations:
        MML HW 13(4.3.13), 14(4.3.15), 15(4.3.17), 16(4.3.19), 17(4.3.21), 18(4.3.23), 19(4.3.25), 20(4.3.27), 21(4.3.29), 22(4.3.31)
        p.299 #13-31 odd
Graph a quadratic function using its vertex, axis of symmetry, and intercepts:

MML HW 23(4.3.33), 24(4.3.35), 25(4.3.37), 26(4.3.39), 27(4.3.41), 28(4.3.43), 29(4.3.45), 30(4.3.47), 47(4.3.81)   p.299-300 #33-47 odd, 81
Find a quadratic function given its vertex and one other point:
        MML HW 31(4.3.49), 32(4.3.51), 33(4.3.53), 42(4.3.71)
        p.300 #49-53 odd, 71
Find the maximum or minimum value of a quadratic function:
        MML HW 34(4.3.55), 35(4.3.57), 36(4.3.59), 37(4.3.61)
        p.300 #55-61 odd
Graph and analyze quadratic functions:
        MML HW 38(4.3.63), 39(4.3.65), 40(4.3.67), 41(4.3.69), 43(4.3.73), 44(4.3.75), 45(4.3.77), 46(4.3.79)
        p.300 #63-69 odd, 73-79 odd
Solve applications involving quadratic functions: p.301 #85–87 odd
        MML HW 48(4.3.85), 49(4.3.87)

Chapter 5: Polynomial and Rational Functions

5.1 Polynomial Functions and Models:
Are You Prepared:
        MML HW 1(5.1.1), 2(5.1.2), 3(5.1.3), 4(5.1.5), 5(5.1.6)
        p.338 #1-3, 5-6
Concepts and Vocabulary:
        MML HW 6(5.1.7), 7(5.1.8), 8(5.1.9), 9(5.1.10), 10(5.1.11), 11(5.1.12), 12(5.1.13), 13(5.1.14), 14(5.1.15), 15(5.1.16)
        p.338 #7-16
Identify polynomial functions and their degree:
        MML HW 16(5.1.17), 17(5.1.19), 18(5.1.21), 19(5.1.23), 20(5.1.25), 21(5.1.27)
        p.338 #17-27 odd
Graph polynomial functions of degree 4 or 5 using transformations:
        MML HW 22(5.1.29), 23(5.1.31), 24(5.1.33), 25(5.1.35), 26(5.1.37), 27(5.1.39), 28(5.1.41)
        p.338 #29-41 odd
Use given zeros to write and analyze polynomial functions:
        MML HW 29(5.1.43), 30(5.1.45), 31(5.1.47), 32(5.1.49), 61(5.1.51 alternate), 62(5.1.53 alternate), 63(5.1.55 alternate), 58(5.1.115), 59(5.1.117)
        p.339-340 #43-55 odd, 115, 117
Identify the real zeros of a polynomial function and their multiplicity:
        MML HW 33(5.1.57), 34(5.1.59), 35(5.1.61), 36(5.1.63), 37(5.1.65), 38(5.1.67)
        p.339 #57-67 odd
Given a graph, identify a polynomial function and construct the polynomial:
        MML HW 39(5.1.69), 40(5.1.71), 41(5.1.73), 42(5.1.75), 43(5.1.77), 44(5.1.79)
        p.339-340 #69-79 odd
Analyze polynomials and create graphs either by hand or by graphing utility:
        MML HW 45(5.1.81), 46(5.1.83), 47(5.1.85), 48(5.1.87), 49(5.1.89), 50(5.1.91), 51(5.1.93), 52(5.1.95), 53(5.1.97), 54(5.1.107), 55(5.1.109), 56(5.1.111), 57(5.1.113), 60(5.1.119)
        p.339-340 #81-97 odd, 107-113 odd, 119

5.2 Properties of Rational Functions:
Are You Prepared:
        MML HW 1(5.2.1), 2(5.2.2), 3(5.2.3)
        p.350 #1-3
Concepts and Vocabulary:
        MML HW 4(5.2.5), 5(5.2.6), 6(5.2.7), 7(5.2.8), 8(5.2.9), 9(5.2.10), 10(5.2.11), 11(5.2.12),

12(5.2.13), 13(5.2.14)

      p.350 #5-14

Find the domain of rational functions:

      MML HW 14(5.2.15), 15(5.2.17), 16(5.2.19), 17(5.2.21), 18(5.2.23), 19(5.2.25)

      p.351 #15-25 odd

Given the graph of a rational function, find the domain, range, asymptotes and intercepts:

      MML HW 20(5.2.27), 21(5.2.29), 22(5.2.31)

      p.351 #27-31 odd

Graph rational functions using transformations:

      MML HW 23(5.2.33), 24(5.2.35), 25(5.2.37), 26(5.2.39), 27(5.2.41), 28(5.2.43),
35(5.2.61)

      p.351 #33-43 odd, 61

Find all asymptotes of a given rational function:

      MML HW 29(5.2.45), 30(5.2.47), 31(5.2.49), 32(5.2.51), 33(5.2.53), 34(5.2.55)

      p.352 #45-55 odd

5.3 The Graph of a Rational Function:

Are You Prepared:

      MML HW 1(5.3.1)

      p.365 #1

Concepts and Vocabulary:

      MML HW 2(5.3.2), 3(5.3.3), 4(5.3.4), 5(5.3.5), 6(5.3.6)

      p.365 #2-6

Analyze the graph of a rational function:

      MML HW 7(5.3.7), 8(5.3.9), 9(5.3.11), 10(5.3.13), 11(5.3.15), 12(5.3.17), 13(5.3.19),
14(5.3.21), 15(5.3.23), 16(5.3.25), 17(5.3.27), 18(5.3.29), 19(5.3.31), 20(5.3.33), 21(5.3.35),
22(5.3.37), 23(5.3.39), 24(5.3.41), 25(5.3.43), 26(5.3.45),27(5.3.47), 28(5.3.49), 29(5.3.51),
30(5.3.53)

      p.365-366 #7-53 odd

5.4 Polynomial and Rational Inequalities:

Are You Prepared:

      MML HW 1(5.4.1), 2(5.4.2)

      p.372 #1, 2

Concepts and Vocabulary:

      MML HW 3(5.4.3), 4(5.4.4)

      p.372 #3, 4

Solve polynomial inequalities graphically:

      MML HW 5(5.4.5), 7(5.4.9), 8(5.4.11),9(5.4.13), 37(5.4.71), 38(5.4.73)

      p.372-374 #5-13 odd, 71, 73

Solve polynomial inequalities algebraically:

      MML HW 12(5.4.19), 13(5.4.21),14(5.4.23), 15(5.4.25),16(5.4.27), 17(5.4.29),18(5.4.31),
27(5.4.49), 28(5.4.51), 30(5.4.55), 32(5.4.59), 35(5.4.67)

      p.373-374 #19-31 odd, 49, 51, 55, 59, 67

Solve rational inequalities graphically:

      MML HW 6(5.4.7), 10(5.4.15),11(5.4.17), 33(5.4.61),34(5.4.63)

      p.372-373 #7, 15, 17, 61, 63

Solve rational inequalities algebraically:

      MML HW 19(5.4.33), 20(5.4.35), 21(5.4.37), 22(5.4.39),23(5.4.41), 24(5.4.43),
25(5.4.45), 26(5.4.47),29(5.4.53), 31(5.4.57), 36(5.4.69)

      p.373-374 #33-47 odd, 53, 57, 69

5.5 The Real Zeros of a Polynomial Function:

Are You Prepared:

MML HW 1(5.5.1), 2(5.5.2), 3(5.5.4)
   p.386 #1, 2, 4
Concepts and Vocabulary:
   MML HW 4(5.5.5), 5(5.5.6), 6(5.5.8), 7(5.5.9), 8(5.5.10)
   p.386 #5-6, 8-10
Use the Remainder and Factor Theorems:
   MML HW 9(5.5.11), 10(5.5.13), 11(5.5.15), 12(5.5.17), 13(5.5.19), 38(5.5.107),
39(5.5.109), 40(5.5.113), 41(5.5.115)
   p.387 #11-19 odd, p.389 #107, 109, 113, 115
Use the Rational Zeros Theorem to list the potential rational zeros of a polynomial function:
   MML HW 14(5.5.33), 15(5.5.35), 16(5.5.37), 17(5.5.39), 18(5.5.41), 19(5.5.43)
   p.387 #33-43 odd
Find the real zeros of a polynomial function:
   MML HW 20(5.5.45), 21(5.5.47), 22(5.5.49), 23(5.5.51), 24(5.5.53), 25(5.5.55),
26(5.5.57), 27(5.5.59), 28(5.5.61), 29(5.5.63), 30(5.5.65), 31(5.5.67)
   p.387-389 #45-67 odd
Graph polynomial functions:
   MML HW 32(5.5.93), 33(5.5.95), 34(5.5.97), 35(5.5.99), 36(5.5.101), 37(5.5.103)
   p.388 #93-103 odd
Use the Intermediate Value Theorem:
   MML HW 42(5.5), 43(5.5), 44(5.5)
   p.388 #Instructor created problems

5.6 Complex Zeros; Fundamental Theorem of Algebra:
Are You Prepared:
   MML HW 1(5.6.1), 2(5.6.2)
   p.394 #1, 2
Concepts and Vocabulary:
   MML HW 3(5.6.3), 4(5.6.4), 5(5.6.5), 6(5.6.6)
   p.394 #3-6
Use the Conjugate Pairs Theorem:
   MML HW 7(5.6.7), 8(5.6.9), 9(5.6.11), 10(5.6.13), 11(5.6.15), 15(5.6.23), 16(5.6.25),
17(5.6.27),18(5.6.29)
   p.394 #7-15 odd, 23-29 odd
Find a polynomial function with specified zeros:
   MML HW 12(5.6.17), 13(5.6.19),14(5.6.21)
   p.394 #17-21 odd
Find the complex zeros of a polynomial function:
   MML HW 19(5.6.31), 20(5.6.33), 21(5.6.35), 22(5.6.37),23(5.6.39)
   p.395 #31-39 odd

Chapter 6: Exponential and Logarithmic Functions

6.2 One-to-One Functions; Inverse Functions:
Are You Prepared:
   MML HW 1(6.2.1), 2(6.2.2), 3(6.2.3)
   p.419 #1-3
Concepts and Vocabulary:
   MML HW 4(6.2.5), 5(6.2.6), 6(6.2.7), 7(6.2.8), 8(6.2.9), 9(6.2.10), 10(6.2.11),
11(6.2.12)
   p.419 #5-12
Determine whether a function is one-to-one:
   MML HW 12(6.2.13), 13(6.2.15), 14(6.2.17), 15(6.2.19), 16(6.2.21), 17(6.2.23),

18(6.2.25)
      p.419-420 #13-25 odd
Determine the inverse of a function defined by a map or a set of ordered pairs:
      MML HW 19(6.2.27), 20(6.2.29), 21(6.2.31), 22(6.2.33)
      p.420 #27-33 odd
Obtain the graph of the inverse function from the graph of the function:
      MML HW 28(6.2.45), 29(6.2.47), 30(6.2.49)
      p.421 #45-49 odd
Find the inverse of a function defined by an equation:
      MML HW 23(6.2.35), 24(6.2.37), 25(6.2.39),26(6.2.41), 27(6.2.43), 31(6.2.51),
32(6.2.53), 33(6.2.55), 34(6.2.57), 35(6.2.59), 36(6.2.61), 37(6.2.63), 38(6.2.65), 39(6.2.67),
40(6.2.69), 41(6.2.71), 42(6.2.73), 48(6.2.85), 50(6.2.89)
      p.420-422 #35-43 odd, 51-73 odd, 85, 89
Determine properties of the inverse of a function:
      MML HW 43(6.2.75), 44(6.2.77), 45(6.2.79), 46(6.2.81), 47(6.2.83), 49(6.2.87)
      p.421-422 #75-83 odd, 87

6.3 Exponential Functions:
Are You Prepared:
      MML HW 1(6.3.1), 2(6.3.2), 3(6.3.3)
      p.434 #1-3
Concepts and Vocabulary:
      MML HW 4(6.3.6), 5(6.3.7), 6(6.3.8), 7(6.3.9), 8(6.3.10), 9(6.3.11), 10(6.3.12),
11(6.3.13), 12(6.3.14)
      p.434 #6-14
Evaluate exponential expressions:
      MML HW 13(6.3.15), 14(6.3.17), 15(6.3.19), 16(6.3.21), 17(6.3.23), 18(6.3.25),
59(6.3.121)
      p.434 #15-25 odd, p.438 #121,
Identify linear and exponential functions and find their equations:
      MML HW 19(6.3.27), 20(6.3.29), 21(6.3.31), 22(6.3.33)
      p.435 #27-33 odd
Graph exponential functions:
      MML HW 23(6.3.35), 24(6.3.37), 25(6.3.39), 26(6.3.41), 27(6.3.43), 28(6.3.44),
29(6.3.45), 30(6.3.47), 31(6.3.49), 32(6.3.51), 33(6.3.53), 34(6.3.55), 35(6.3.57), 36(6.3.59),
37(6.3.61), 57(6.3.101), 59(6.3.103)
      p.435 #35-43 odd, 44, 45-61 odd, 101, 103
Solve exponential equations:
      MML HW 38(6.3.63), 39(6.3.65), 40(6.3.67), 41(6.3.69), 42(6.3.71), 43(6.3.73),
44(6.3.75), 45(6.3.77), 46(6.3.79), 47(6.3.81), 48(6.3.83), 49(6.3.85), 50(6.3.87), 54(6.3.95),
55(6.3.97), 56(6.3.99)
      p.436 #63-87 odd, 95-99 odd
Find the equations of exponential functions:
      MML HW 51(6.3.89), 52(6.3.91), 53(6.3.93)
      p.436 #89-93 odd

6.4 Logarithmic Functions:
Concepts and Vocabulary:
      MML HW 1(6.4.4), 2(6.4.5), 3(6.4.6), 4(6.4.7), 5(6.4.8), 6(6.4.9), 7(6.4.10)
      p.448 #4-10
Change exponential statements to logarithmic statements and vice versa:
      MML HW 8(6.4.11), 9(6.4.13), 10(6.4.15), 11(6.4.17), 12(6.4.19), 13(6.4.21), 14(6.4.23),
15(6.4.25)
      p.448 #11-25 odd
Evaluate logarithmic expressions:

MML HW 16(6.4.27), 17(6.4.29), 18(6.4.31), 19(6.4.33), 20(6.4.35), 21(6.4.37),
28(6.4.51), 29(6.4.53), 30(6.4.55), 31(6.4.57)
    p.449 #27-37 odd, 51-57 odd
Determine the domains of logarithmic functions:
    MML HW 22(6.4.39), 23(6.4.41), 24(6.4.43), 25(6.4.45), 26(6.4.47), 27(6.4.49)
    p.449 #39-49 odd
Graph logarithmic functions:
    MML HW 33(6.4.61), 34(6.4.63), 35(6.4.65), 36(6.4.67), 37(6.4.69), 38(6.4.71),
39(6.4.73), 40(6.4.75), 41(6.4.77), 42(6.4.79), 43(6.4.81), 44(6.4.83), 45(6.4.85), 46(6.4.87),
45(6.4.85), 46(6.4.87), 60(6.4.115), 61(6.4.117)
    p.449-450 #61-87 odd, 115, 117
Solve logarithmic equations:
    MML HW 32(6.4.59), 47(6.4.89), 48(6.4.91), 49(6.4.93), 50(6.4.95), 51(6.4.97),
52(6.4.99), 53(6.4.101), 54(6.4.103), 55(6.4.105), 56(6.4.107), 57(6.4.109), 58(6.4.111),
59(6.4.113)
    p.449-450 #59, 89-113 odd

6.5 Properties of Logarithms:
Concepts and Vocabulary:
    MML HW 1(6.5.1), 2(6.5.2), 3(6.5.3), 4(6.5.4), 5(6.5.5), 6(6.5.6), 7(6.5.7), 8(6.5.8),
9(6.5.9), 10(6.5.10), 11(6.5.11), 12(6.5.12)
    p.459 #1-12
Work with the properties of logarithms:
    MML HW 13(6.5.13), 14(6.5.15), 15(6.5.17), 16(6.5.19), 17(6.5.21), 18(6.5.23),
19(6.5.25), 20(6.5.27), 21(6.5.29), 22(6.5.31), 23(6.5.33), 24(6.5.35), 46(6.5.85)
    p.459-460 #13-35 odd, 85
Write logarithmic expressions as a sum or difference of logarithms:
    MML HW 25(6.5.37), 26(6.5.39), 27(6.5.41), 28(6.5.43), 29(6.5.45), 30(6.5.47),
31(6.5.49), 32(6.5.51), 33(6.5.53), 34(6.5.55),
    p.459 #37-55 odd
Write logarithmic expressions as a single logarithm:
    MML HW 35(6.5.57), 36(6.5.59), 37(6.5.61), 38(6.5.63), 39(6.5.65), 40(6.5.67),
41(6.5.69)
    p.459 #57-69 odd
Evaluate logarithms whose base is neither 10 nor e:
    MML HW 42(6.5.71), 43(6.5.73), 44(6.5.75), 45(6.5.77)
    p.460 #71-77 odd
Express logarithmic equations as functions of x:
    MML HW 47(6.5.87), 48(6.5.89), 49(6.5.91), 50(6.5.93), 51(6.5.95)
    p.460 #87-95 odd

6.6 Logarithmic and Exponential Equations:
Are You Prepared:
    MML HW 1(6.6.1), 2(6.6.2)
    p.465 #1, 2
Solve logarithmic equations:
    MML HW 3(6.6.5), 4(6.6.7), 5(6.6.9), 6(6.6.11), 7(6.6.13), 8(6.6.15), 9(6.6.17),
10(6.6.19), 11(6.6.21),12(6.6.23), 13(6.6.25), 14(6.6.27), 15(6.6.29), 16(6.6.31), 17(6.6.33),
18(6.6.35), 19(6.6.37), 20(6.6.39), 35(6.6.83), 36(6.6.85), 40(6.6.93), 41(6.6.95)
    p.465-466 #5-39 odd, 83, 85, 93, 95
Solve exponential equations:
    MML HW 21(6.6.41), 22(6.6.43), 23(6.6.45), 24(6.6.47), 25(6.6.49), 26(6.6.51),
27(6.6.53), 28(6.6.55), 29(6.6.57), 30(6.6.59), 31(6.6.61), 32(6.6.63), 33(6.6.65), 34(6.6.67),
37(6.6.87), 38(6.6.89), 39(6.6.91), 42(6.6.97), 43(6.6.99), 44(6.6.101), 45(6.6.103)
    p.465-466 #41-67 odd, 87-91 odd, 97-103 odd

6.7 Financial Models:
Are You Prepared:
  MML HW 1(6.7.1), 2(6.7.2)
  p.474 #1, 2
Concepts and Vocabulary:
  MML HW 3(6.7.3), 4(6.7.4), 5(6.7.5), 6(6.7.6)
  p.474 #3-6
Determine the future value of a lump sum of money:
  MML HW 7(6.7.7), 8(6.7.9), 9(6.7.11), 10(6.7.13), 17(6.7.27), 18(6.7.29)
  p.474-475 #7-13 odd, 27, 29
Determine the present value of a lump sum of money:
  MML HW 11(6.7.15), 12(6.7.17), 13(6.7.19), 14(6.7.21)
  p.475 #15-21 odd
Calculate effective rates of interest:
  MML HW 15(6.7.23), 16(6.7.25), 22(6.7.37)
  p.475 #23, 25, 37
Determine the rate of interest or time required to double or triple lump sums of money:
  MML HW 19(6.7.31), 20(6.7.33), 21(6.7.35), 32(6.7.67)
  p.475-476 #31-35 odd, 67
Solve applications involving financial models:
  MML HW 23(6.7.39), 24(6.7.41), 25(6.7.43), 26(6.7.45), 27(6.7.47), 28(6.7.49),
29(6.7.51), 30(6.7.53), 31(6.7.55)
  p.475-477 #39-55 odd

6.8 Exponential Growth and Decay Models; Newton's Law; Logistic Growth and Decay Models:
Find equations of populations that obey the law of uninhibited growth:
  MML HW 1(6.8.1), 3(6.8.5), 4(6.8.7), 10(6.8.29)
  p.486-487 #1, 5, 7, 29
Find equations of populations that obey the law of decay:
  MML HW 2(6.8.3), 5(6.8.9), 6(6.8.11), 7(6.8.17), 8(6.8.19), 9(6.8.21)
  p.486-487 #3, 9, 11, 17-21 odd

Chapter 11: Analytic Geometry

11.2 The Parabola:
Are You Prepared:
  MML HW 1(11.2.1), 2(11.2.2), 3(11.2.3), 4(11.2.5)
  p.786 #1-3, 5
Concepts and Vocabulary:
  MML HW 5(11.2.6), 6(11.2.7), 7(11.2.8), 8(11.2.9),9(11.2.10), 10(11.2.11), 11(11.2.12)
  p.786 #6-12
Write the equation of a parabola given a graph:
  MML HW 12(11.2.13), 13(11.2.15), 14(11.2.17), 15(11.2.19),34(11.2.57), 35(11.2.59),
36(11.2.61),37(11.2.63)
  p.786-787 #13-19 odd, 57-63 odd
Write the equation of a parabola from given information:
  MML HW 16(11.2.21), 17(11.2.23), 18(11.2.25), 19(11.2.27),20(11.2.29), 21(11.2.31),
22(11.2.33),23(11.2.35), 24(11.2.37)
  p.787 #21-37 odd
Find the vertex, focus, and directrix of a parabola:
  MML HW 25(11.2.39), 26(11.2.41), 27(11.2.43), 28(11.2.45), 29(11.2.47), 30(11.2.49),
31(11.2.51), 32(11.2.53), 33(11.2.55)
  p.787 #39-55 odd

Solve applications involving parabolas:
MML HW 38(11.2.65), 39(11.2.67), 40(11.2.69), 41(11.2.71), 42(11.2.73), 43(11.2.75)
p.787-788 #65-75 odd

11.3 The Ellipse:
Are You Prepared:
MML HW 1(11.3.1), 2(11.3.2), 3(11.3.3), 4(11.3.4), 5(11.3.5), 6(11.3.6)
p.796 #1-6
Concepts and Vocabulary:
MML HW 7(11.3.7), 8(11.3.8), 9(11.3.9), 10(11.3.10), 11(11.3.11), 12(11.3.12)
p.796 #7-12
Write an equation for an ellipse given its graph:
MML HW 13(11.3.13), 14(11.3.15), 26(11.3.39), 27(11.3.41)
p.796-797 #13, 15, 39, 41
Analyze and graph an ellipse given its equation:
MML HW 15(11.3.17), 16(11.3.19), 17(11.3.21), 18(11.3.23), 19(11.3.25), 28(11.3.43), 29(11.3.45), 30(11.3.47), 31(11.3.49), 32(11.3.51), 33(11.3.53), 39(11.3.65), 40(11.3.67)
p.797-798 #17-25 odd, 43-53 odd, 65, 67
Write and graph an equation for an ellipse from given information:
MML HW 20(11.3.27), 21(11.3.29), 22(11.3.31), 23(11.3.33), 24(11.3.35), 25(11.3.37), 34(11.3.55), 35(11.3.57), 36(11.3.59), 37(11.3.61), 38(11.3.63)
p.797 #27-37 odd, 55-63 odd
Solve applications involving ellipses:
MML HW 41(11.3.69), 42(11.3.71), 43(11.3.73), 44(11.3.79), 45(11.3.81)   p.797-798
#69-73 odd, 79-81 odd

11.4 The Hyperbola:
Are You Prepared:
MML HW 1(11.4.1), 2(11.4.2), 3(11.4.3), 4(11.4.5), 5(11.4.6)
p.809 #1-3, 5-6
Concepts and Vocabulary:
MML HW 6(11.3.7), 7(11.3.8), 8(11.3.9), 9(11.3.10), 10(11.3.11), 11(11.3.12), 12(11.3.13), 13(11.3.14)
p.809 #7-14
Write the equation for a hyperbola, given its graph:
MML HW 14(11.3.15), 15(11.3.17), 25(11.3.37), 26(11.3.39)
p.809-810 #15, 17, 37, 39
Find and graph the equation for a hyperbola from given information:
MML HW 16(11.3.19), 17(11.3.21), 18(11.3.23), 19(11.3.25), 20(11.3.27),
p.809-810 #19-27 odd
Analyze and graph a hyperbola:
MML HW 21(11.3.29), 22(11.3.31), 23(11.3.33), 24(11.3.35), 27(11.3.41), 28(11.3.43), 29(11.3.45), 30(11.3.47), 31(11.3.49), 32(11.3.51), 33(11.3.53), 34(11.3.55), 35(11.3.57), 36(11.3.59), 37(11.3.61), 38(11.3.63), 39(11.3.65), 44(11.3.83)
p.810-811 #29-35 odd, 41-65 odd, 83
Identify and analyze various conics:
MML HW 40(11.3.67), 41(11.3.69), 42(11.3.71), 43(11.3.73)
p.810 #67-73 odd

Chapter 12: Systems of Equations and Inequalities

12.1 Systems of Linear Equations: Substitution and Elimination:
Are You Prepared:

MML HW 1(12.1.1), 2(12.1.2)
     p.854 #1,2
Concepts and Vocabulary:
     MML HW 3(12.1.3), 4(12.1.4), 5(12.1.5), 6(12.1.6), 7(12.1.7), 8(12.1.8)
     p.854 #3-8
Determine if given ordered pairs or ordered triples are solutions to systems of equations:
     MML HW 9(12.1.9), 10(12.1.11), 11(12.1.13), 12(12.1.15), 13(12.1.17), 14(12.1.18)
     p.855 #9-17 odd, 18
Solve systems of two equations by substitution or elimination; identify inconsistent systems:
     MML HW 15(12.1.19), 16(12.1.21), 17(12.1.23), 18(12.1.25), 19(12.1.27), 20(12.1.29),
21(12.1.31), 22(12.1.33), 23(12.1.35), 24(12.1.37), 25(12.1.39), 26(12.1.41)
     p.855 #19-41 odd
Solve systems of three equations containing three variables; identify inconsistent systems:
     MML HW 27(12.1.43), 28(12.1.45), 29(12.1.47), 30(12.1.49), 31(12.1.51), 32(12.1.53),
33(12.1.55)
     p.855-856 #43-55 odd
Find a, b, and c in functions of form $y=ax^2+bx+c$ using three points and systems of equations:
     MML HW 34(12.1.73)
     p.857 #73

12.2 Systems of Linear Equations: Matrices:
Concepts and Vocabulary:
     MML HW 1(12.2.1), 2(12.2.2), 3(12.2.3), 4(12.2.4), 5(12.2.5), 6(12.2.6)
     p.870 #1-6
Write augmented matrices of systems of linear equations:
     MML HW 7(12.2.7), 8(12.2.9), 9(12.2.11), 10(12.2.13), 11(12.2.15), 12(12.2.17)
     p.870 #7-17 odd
Write systems of equations from augmented matrices and perform row operations on matrices:
     MML HW 13(12.2.19), 14(12.2.21), 15(12.2.23), 16(12.2.25)
     p.870-871 #19-25 odd
Use the reduced row echelon form of augmented matrices to determine solutions to systems:
     MML HW 17(12.2.27), 18(12.2.29), 19(12.2.31), 20(12.2.33), 21(12.2.35), 22(12.2.37)
     p.871 #27-37 odd
Solve linear systems of equations using matrices:
     MML HW 23(12.2.39), 24(12.2.41), 25(12.2.43), 26(12.2.45), 27(12.2.47), 28(12.2.49),
29(12.2.51), 30(12.2.53), 31(12.2.55), 32(12.2.57), 33(12.2.59), 34(12.2.61),35(12.2.63),
36(12.2.65), 37(12.2.67), 38(12.2.69), 39(12.2.71), 40(12.2.73)
     p.871-872 #39-73 odd

12.3 Systems of Linear Equations: Determinants:
Concepts and Vocabulary:
     MML HW 1(12.3.1), 2(12.3.2), 3(12.3.3), 4(12.3.4)
     p.881 #1-4
Evaluate 2 by 2 determinants:
     MML HW 5(12.3.7), 6(12.3.9)
     p.882 #7, 9
Evaluate 3 by 3 determinants:
     MML HW 7(12.3.11), 8(12.3.13)
     p.882 #11, 13
Use Cramer's Rule to solve a system of two equations containing two variables:
     MML HW 9(12.3.17), 10(12.3.19), 11(12.3.21), 12(12.3.23)
     p.882 #17-23 odd
Use Cramer's Rule to solve a system of three equations containing three variables:
     MML HW 13(12.3.33), 14(12.3.35), 15(12.3.37)
     p.882 #33-37 odd

Use properties of determinants to find values of determinants or to solve for variables:
        MML HW 16(12.3.51), 17(12.3.53), 18(12.3.55)
        p.882-883 #51-55 odd

12.4 Matrix Algebra:
Concepts and Vocabulary:
        MML HW 1(12.4.1), 2(12.4.2), 3(12.4.3), 4(12.4.4), 5(12.4.5), 6(12.4.6), 7(12.4.7),
8(12.4.8)
        p.897 #1-8
Use operations with matrices to evaluate expressions:
        MML HW 9(12.4.9), 10(12.4.11), 11(12.4.13), 12(12.4.15), 13(12.4.17), 14(12.4.19),
15(12.4.21), 16(12.4.23)
        p.898 #9-23 odd
Find products of matrices:
        MML HW 17(12.4.25), 18(12.4.27), 19(12.4.29)
        p.898 #25-29 odd
Find inverses of matrices or show that some matrices have no inverses:
        MML HW 20(12.4.31), 21(12.4.33), 22(12.4.35), 23(12.4.37), 24(12.4.39), 35(12.4.61),
36(12.4.63), 37(12.4.65)
        p.898 #31-39 odd, 61-65 odd, VQ-3
Solve systems of linear equations using inverse matrices:
        MML HW 25(12.4.41), 26(12.4.43), 27(12.4.45), 28(12.4.47), 29(12.4.49), 30(12.4.51),
31(12.4.53), 32(12.4.55), 33(12.4.57), 34(12.4.59)
        p.898 #41-59 odd

Chapter 13: Sequences; Induction; the Binomial Theorem

13.1 Sequences:
Are You Prepared:
        MML HW   1(13.1.1), 2(13.1.2)
        p.946 #1, 2
Concepts and Vocabulary:
        MML HW   3(13.1.3), 4(13.1.4),5(13.1.5), 6(13.1.6),7(13.1.7), 8(13.1.8)
        p.947 #3-8
Evaluate factorial expressions:
        MML HW   9(13.1.9), 10(13.1.11),11(13.1.13)
         p.947 #9-13 odd
Write terms of a sequence:
        MML HW   12(13.1.15), 13(13.1.17), 14(13.1.19), 15(13.1.21),16(13.1.23), 17(13.1.25)
        p.947 #15-25 odd
Write the nth term of a sequence:
        MML HW   18(13.1.27), 19(13.1.29),20(13.1.31), 21(13.1.33)
         p.947 #27-33 odd
Write terms of a sequence defined recursively:
        MML HW   22(13.1.35), 23(13.1.37), 24(13.1.39), 25(13.1.41), 26(13.1.43), 27(13.1.45),
28(13.1.47)
        p.947 #35-47 odd
Use summation notation:
        MML HW   29(13.1.49), 30(13.1.51), 31(13.1.53), 32(13.1.55), 33(13.1.57), 34(13.1.59),
35(13.1.61), 36(13.1.63), 37(13.1.65), 38(13.1.67)
        p.947 #49-67 odd
Find the sum of a sequence:
        MML HW   39(13.1.69), 40(13.1.71), 41(13.1.73), 42(13.1.75), 43(13.1.77), 44(13.1.79)

p.948 #69-79 odd

13.2 Arithmetic Sequences:
Concepts and Vocabulary:
        MML HW   1(13.2.1), 2(13.2.2), 3(13.2.3), 4(13.2.4), 5(13.2.5), 6(13.2.6)
        p.954 #1-6
Determine whether a sequence is arithmetic:
        MML HW   7(13.2.7), 8(13.2.9), 9(13.2.11), 10(13.2.13), 11(13.2.15)
        p.954 #7-15 odd
Find a formula for the nth term of an arithmetic sequence:
        MML HW   12(13.2.17), 13(13.2.19), 14(13.2.21), 15(13.2.23), 16(13.2.25), 17(13.2.27),
18(13.2.29), 19(13.2.31), 20(13.2.33), 21(13.2.35), 22(13.2.37)
        p.954-955 #17-37 odd
Find the sum of an arithmetic sequence:
        MML HW 23(13.2.39), 24(13.2.41), 25(13.2.43), 26(13.2.45), 27(13.2.47), 28(13.2.49),
29(13.2.51), 30(13.2.53), 31(13.2.55), 32(13.2.59)
        p.954 #39-55 odd, 59

13.3 Geometric Sequences; Geometric Series:
Concepts and Vocabulary:
        MML HW 1(13.3.3), 2(13.3.4), 3(13.3.5), 4(13.3.6), 5(13.3.7), 6(13.3.8)
        p.964 #3-8
Determine whether a sequence is geometric:
        MML HW 7(13.3.9), 8(13.3.11), 9(13.3.13), 10(13.3.15), 11(13.3.17)
        p.964-965 #9-17 odd
Find a formula for the nth term of a geometric sequence:
        MML HW 12(13.3.19), 13(13.3.21), 14(13.3.23), 15(13.3.25), 16(13.3.27), 17(13.3.29),
18(13.3.31), 19(13.3.33), 20(13.3.35), 21(13.3.37), 22(13.3.39)
        p.964 #19-39 odd
Find the sum of a geometric sequence:
        MML HW 23(13.3.41), 24(13.3.43), 25(13.3.45)
        p.964 #41-45 odd
Determine whether a geometric series converges or diverges:
        MML HW 26(13.3.53), 27(13.3.55), 28(13.3.57), 29(13.3.59), 30(13.3.61), 31(13.3.63),
32(13.3.65), 33(13.3.67), 34(13.3.69), 35(13.3.71), 36(13.3.73), 37(13.3.75), 38(13.3.77),
39(13.3.79), 40(13.3.81)
        p.965 #53-81 odd

13.4 Mathematical Induction:
Use mathematical induction to prove statements:
        MML HW 1(13.4.1), 2(13.4.3), 3(13.4.5), 4(13.4.7), 5(13.4.9), 6(13.4.11), 7(13.4.13),
8(13.4.15), 9(13.4.17)
        p.970 #1-17 odd

13.5 The Binomial Theorem:
Concepts and Vocabulary:
        MML HW 1(13.5.1), 2(13.5.2), 3(13.5.3)
        p.976 #1-3
Evaluate expressions involving n items taken j at a time:
        MML HW 4(13.5.5), 5(13.5.7), 6(13.5.9), 7(13.5.11), 21(13.5.49)
        p.976 #5-11 odd, 49
Use the Binomial Theorem to expand expressions:
        MML HW 8(13.5.17), 9(13.5.19), 10(13.5.21), 11(13.5.23), 12(13.5.25), 13(13.5.27),
14(13.5.29), 15(13.5.31), 16(13.5.33), 17(13.5.35), 18(13.5.37), 19(13.5.39), 20(13.5.41)
        p.976-977 #17-41 odd