FINAL REVIEW

To prepare for the test, you should study **all quizzes and tests**, as well as the **homework problems** listed below OR the similar examples done in class from the listed topics.

Important topics:

1) Finding limits using properties, The Sandwich Theorem, L'Hopital rule.
(several questions)

2.2 Exercises 11 – 50, 63 - 66
2.4 Exercises 3, 4, 5, 7, 10, 15, 17, 21, 27, 30, 33, 35, 36, 39
2.5 Exercises 31 – 38
3.5 Exercises 47, 53
4.5 Exercises 1, 7, 17, 22, 25, 28, 31, 34, 37, 40, 43, 46, 51, 55, 56, 58, 60
Handout Review Test 2 Exercise 4
Handout Review Test 1 Exercises 4 – 28

2) Continuity
(one or two questions)

2.5 Exercises 43, 44, 45, 48
3.4 Exercises 47, 48
3.5 Exercises 57, 58
4.5 Exercise 79
Handout Review Test 1 Exercises 3

3) Finding tangents to the graph of a function
(one or two questions)

3.1 Exercises 13, 17, 27, 29, 33, 34, 35
3.3 Exercises 55, 56
3.6 Exercises 95
3.7 Exercises 31, 34, 37
Handout Review Test 1 Exercises 36, 40

4) Finding derivatives of functions
using basic formulas, the product rule, the quotient rule, the chain rule, and logarithmic differentiation.
(multiple questions)

3.2 Exercises 1, 7, 13, 19, 43, 44, 45, 47, 53
3.3 Exercises 1, 7, 13, 19, 25, 31, 37, 40, 49
3.5 Exercises 1, 7, 10, 11, 13, 16, 19, 22, 25, 28, 31
3.6 Exercises 23, 25, 26, 29, 32, 35, 38, 39, 41, 43, 47, 50, 53, 56, 59, 61, 65, 68, 71, 74, 77, 83
3.8 Exercises 11, 13, 14, 27, 30, 33, 36, 37, 38, 41, 49, 52, 57, 62, 69, 77, 82, 85, 91, 93, 96
3.9 Exercises 21, 24, 27, 30, 33, 36, 41, 42
Handout Review Test 1 Exercises 29 – 35 , 39

5) The derivative as a rate of change and related rates (3.4, 3.10)
(one or two questions)

Handout Sections 3.4 & 3.9 – All exercises
3.3 Exercises 1, 7, 15, 18, 26, 28
3.9 Exercises 1, 13, 15, 17, 19, 20, 23, 31

6) Implicit Differentiation (3.7)
(one or two questions)

3.7 Exercises 1, 7, 10, 13, 16, 19, 21, 25, 28

7) Extreme values of functions (4.1)
(one or two questions)

4.1 Exercises 1 – 8, 21, 29, 31, 37, 39, 43, 45, 49, 52
Handout Review Test 2 Exercises 1, 2

8) Optimization applications (4.1, 4.6)
(one or two questions)

Handout 4.1 & 4.2 Exercises 2, 3, 4
4.6 Examples 1, 2, 3
Handout Section 4.6 Exercises 1 – 5, 7, 8, 9, 11 – 15

9) Graphing functions (4.3, 4.4)
(one question)

4.4 Exercises 11, 15, 19, 22, 47, 49, 54, 57
Handout Review Test 2 Exercise 3 (b, c, e)

10) Finding antiderivatives and evaluating definite integral (4.8, 5.5, 5.6, 7.1, 8.1)
(multiple questions)

4.8 Exercises 25 – 70, 91, 97, 105, 109
5.4 Exercises 1 – 34, 39 – 56, 69, 70, 77, 78, 83
5.5 Exercises 1 – 66, 73
5.6 Exercises 1 – 46
7.1 Exercises 1 – 46
8.1 Exercises 1 – 50

11) Finding areas (5.3, 5.4, 5.6)
(several questions)

5.3 Exercises 17, 18, 19, 20, 21, 53
5.4 Exercises 51, 52, 53, 54, 55, 56, 57, 58, 59
5.6 Exercises 47 – 62, 64, 67, 73, 85, 97, 99, 100, 106