

MATH 1041: RECOMMENDED HOMEWORK PROBLEMS

Text: Hass-Weir-Thomas, *University Calculus*, Pearson Publishing Co., 2007

Section 2.1, 9, 15, 20

Section 2.2, 1-3, 11-35 odd, 39-43 odd, 47, 49, 51, 68, 69a, 84, 85

Section 2.4, 1-3, 5-9, 11, 12, 15, 17, 21-29 odd, 33, 35, 43-61 odd

Section 2.5, 1-9, 13, 15, 17-21 (in Problems 17-21 also find $\lim f(x)$ as $x \rightarrow \infty$ and $x \rightarrow -\infty$)

Section 2.6, 1-4, 5-10, 13-27 odd, 35, 37, 39, 40, 46, 47, 63, 65, 67, 70 (in Problems 63-70, just show that solutions exist; do not find them)

Section 2.7, 5, 7, 13, 15, 19, 21, 23, 27, 31, 33

Section 3.1, 1, 3, 6, 7, 13, 15 (in Problems 13 and 15 also find equations of the tangent lines), 31, 33, 35, 36, 37-42

Additional and Advanced Exercises (pp.234-236), 15, 17 (these problems should be assigned right after Section 3.1; for Problem 15, use without proof that $(\sin x)' = \cos x$)

Section 3.2, 1-13 odd, 17-21 odd, 25-35 odd, 39, 43, 47, 51

Section 3.3, 1, 3, 5, 7, 8, 12

Section 3.4, 1-13 odd, 17, 23, 25, 31, 33 (in Problems 31 and 33 do not visualize by graphing functions with a grapher), 35, 37

Section 3.5, 9-29 odd, 33-35, 37-43 odd, 47, 48, 63, 65, 73

Section 3.6, 1-11 odd, 14, 27, 29, 31, 35, 38 (in Problems 29-38, find an equation of the tangent line only; do not find the normal)

Section 3.7, 11-29 odd, 32, 33, 38-40, 41-53 odd, 67-71 odd, 83, 89-95 odd

Section 3.8, 21, 23, 25, 31, 33, 39, 40, 42

Section 3.9, 1-3, 6, 7, 13-15, 21-23, 27, 29

Section 3.10, 1, 3-5, 8, 9, 11-14 (in Problems 8-14 use linearization to find an approximate value for $f(x_0)$ and then compare your value with a calculator value), 17, 39, 41, 43

Section 4.1, 1-4, 17, 19, 22, 23, 27, 30, 31, 33, 34, 55, 57, 59, 61

Section 4.2, 1-4, 5, 6, 7, 9, 10, 15, 17, 19, 45, 46

Section 4.3, 1-11 odd, 12, 15-25 odd, 29, 31, 41, 43, 44 (in this section, ignore technology instructions: item (d) in Problems 9-31 and item (b) in Problems 41-44; instead, make sure that they identify each extremal point as a local maximum or a local minimum), 47, 49, 51, 53

Section 4.4, 1-3, 5, 6, 8, 11-21 odd, 25, 27, 29, 67-70

Section 4.5, 1, 3-5, 7-9, 14, 15, 20, 21, 23, 57a, 58a

Section 4.6, 1, 3, 5, 9, 15-27 odd, 33, 35, 40, 41, 43, 45, 46, 47-55 odd, 61-63

Section 4.8, 27-51 odd, 55, 57, 61, 62, 89-95 odd, 96, 99, 102, 105, 107