MATH 1041 RECOMMENDED HOMEWORK PROBLEMS Spring 2019

1. Text: James Stewart, *Calculus, Early Transcendentals*, **8th** Edition, Cengage Learning.

2. *Math 1041 Supplementary Exercises* **(SE)**

You are expected to solve **ALL** of the problems listed here and **write out** your solutions. The problems whose numbers are not boxed you will also need to do on WebAssign (where they may be slightly modified).

Chapter 2: Limits and Derivatives

2.1: 3, 5, **7a**

2.2: 4, 5, 7, 9, 11, **12**, 15, 17, **18**, 31, **32**, 33, 35, **36**, 39, 40, 42, **44a**

2.3: 1, 2, 11, **12**, 13, 17, 18, 21, **22**, **23**, 24, **25**, 26, 27, 30, 37, 38, 41, 42, 49, 50, **51**

2.5: 3, 5, **6**, 7, **8**, **18**, 20, **21**, **22**, 23, 35, 36, **37**, 39, **40**, **41**, 43, 45, 47, **49ab**, 50, 53, 55; also solve **SE 2.5**

2.6: 3, **4**, **6**, 7, **9**, 13, 15, 17, **18**, 19, **23**, **24**, 25, 27, 30, 31, 32, 33, 35, **36**, 37, **40**, **42**, **43a**, **47**, 49, 51, 52, 67; also solve **SE 2.6**

2.7: 1, 3ab, 7, 10ab, 13, 15, **16ab**, **17**, 20, **21**, 22, 31, 33, 35, **37**, **38**, **39**, **40**, 41, **42**, 44

2.8: **21**, **23**, 26, 27, 29, 41, **42**, **43**, **44**

Chapter 3: Differentiation Rules

3.1: 3, 4, 5, 6, 9, 11, 13, **14**, 16, **18**, 19, 20, **22**, 23, **25**, **26**, **29**, 31, 33, 34, **35**, **37** (find only the tangent line), 40 (no graphing), **45**, 46, 49, **50ab**, 55, **56**, **58**, **59**

3.2: 3, **4**, 5, **6**, 7, 11, **13**, 14, **19**, **20**, 21, 27, **28**, 31, **32**, **34** (find only the tangent line), 41, 43, **44**, 45, 46, **47**, **51**, 52, 54

3.3: 1, **2**, **3**, **4**, 5, **6**, 9, **11**, **12**, **21**, 22, **23**, **24**, 29, **30**, 32, 33, **34**, 35

3.4: 1, 3, **4**, 5, **6**, 7, **8**, 9, **10**, 11, **12**, **13**, 14, **16**, 17, **18**, 21, 23, **25**, 28, 31, **36**, 37, **40**, 50, 53, **54**, **59** (in 59, assume that $0 \le x \le 2\pi$), 61, 62, 63, 64, 69, 79, **80a**

3.5: 5, **7**, 10, 11, 12, **13**, **14**, 15, **19**, 21, 25, **26**, **27**, **28**, 49, **50**, 51, **52**, 55, **56**, **57**

3.6: 2, 3, 4, 6, 9, **10**, **11**, 12, 13, 15, 19, 23, **24**, **25**, **31**, 33, **34**, 36 (no graphing), 39, **40**, **42**, 43, 44, 47, 48, 49, 50

3.7: **1**, **3**, **4** (In Problems 1, 3, 4, do parts (a)–(e) and (g); also determine whether the particle is speeding up or slowing down at $t = \frac{4}{3}$ second), 5, 7, 8, 13ab, 14, 15

3.9: **1**, 2, 3, 4, 5, 6, **7**, 9, **10**, **11**, **12**, 13, 14, 16, 17, 21, 23, 30, **31**

3.10: **1**, 2, 3, 5 (no graphing), 6 (no graphing), 23, **24**, 25, **26**, **27**; also solve **SE 3.10**

Chapter 4: Applications of Differentiation

4.1: 5, **6**, 7, **8**, **9**, 10, 11, **12**, 13, 17, **21**, 23, 26, 27, 30, 35, 37, 41, **42**, 43, 49, **52**, 53, 55, **56**, **59**, **60**, 61, **62**; also solve **SE 4.1**

4.2: **1**, **2**, **3**, **4**, 5, **6**, 7, **8**, 9, 11, **12**, 13, **14**, 15 (no graphing), 17

4.3: 1, 2, 5, **6**, **8**, 9, 11, 13, 17, 19, **25**, **26**, 27, 28, 29, **31**, 34, 35, 36, 39, 42, 43, **48**, **49a**, **52a**, **53a**, **56a**, 57

4.4: 1, **7**, 8, **11**, **12**, 13, **14**, 15, **16**, 17, **18**, 19, 20, 21, **23**, 25, 27, 30, 31, 32, **35**, 37, 40

4.9: 1, 4, 5, **11**, 13, **14**, 15, 16, **17**, 18, 23 (no graphing), **24** (no graphing), 31, 33, **34**, **36**

4.7: 2, 3, 5, 7, 8, 11, 12, 13, 14, 15, 16, 21, **22**; also solve **SE 4.1**

Chapter 5: Integrals

5.2: 33, 34, **48**, **49**, 52, 53

5.3: **45**, **46**, **47**

5.4: 5, 6, **10**, 11, 12, 16, 21, 23, 27, 28, **29**, 31, **32**, 33, **36**, 37, **39**, 41, 43

5.5: 1, **2**, 3, 4, 5, **6**, 7, **8**, 9, 10, **12**, 13, **15**, **16**, 17, **18**, **20**, 21, 23, 25, **27**, 28, **31**, **32**