

Text: **Hass, Weir, Thomas**, *University Calculus*, 2007, Pearson Education, Inc.

### Chapter 2: Limits and Continuity

**2.1:** 4, 5, 9, 15, 20

**2.2:** 1–3, 11–35 odd, 39–43 odd, 47, 49, 51, 68, 69a, 84, 85

**2.4:** 1–3, 5–9, 11, 12, 15, 17, 21–29 odd, 33, 35, 43–49 odd, 51, 57, 59, 61 (in Problems 51–61 also give equations of the horizontal asymptotes)

**2.5:** 1–9, 13, 15, 17–21 (in Problems 17–21 also find  $\lim f(x)$  as  $x \rightarrow \infty$  and  $x \rightarrow -\infty$ ), 31, 39, 41

**2.6:** 1–4, 5–10, 13–27 odd, 35, 38, 39, 40, 46, 47, 63, 65, 67, 70 (in Problems 63–70, just show that solutions exist; do not find them)

**2.7:** 5, 7, 13, 15, 19, 23, 25, 27, 31, 33

### Chapter 3: Differentiation

**3.1:** 1, 3, 6, 13, 15 (in Problems 13 and 15 also find equations of the tangent lines), 27–30, 31, 33, 35, 36, 37–42. Also do Problems 15 and 17 from **Additional and Advanced Exercises**, pp. 234–236 (for Problem 15, use without proof that  $(\sin x)' = \cos x$ )

**3.2:** 1–13 odd, 17–21 odd, 25–35 odd, 39, 43, 47, 51

**3.3:** 1, 3, 5, 7, 8, 12

**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, 48

**3.5:** 9–29 odd, 33–35, 37–43 odd, 47, 48, 50, 63, 73, 111

**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)

**3.7:** 11–29 odd, 32, 33, 38–40, 43, 45, 50, 51, 53, 55, 57, 61, 64, 67–71 odd, 83, 89–95 odd

**3.8:** 21, 23, 25, 31, 33, 34, 39, 40, 42

**3.9:** 1–3, 6, 7, 10, 13, 21, 23, 27, 29, 30

**3.10:** 1, 3–5, 8, 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

### Chapter 4: Applications of Derivatives

**4.1:** 1–4, 17, 19, 22, 23, 27, 30, 31, 33, 34, 55, 57, 59, 61 (in Problems 55–61 find the critical points only)

**4.2:** 1–4, 5, 6, 7, 9, 10, 15, 17, 19, 45, 46

**4.3:** 1–11 odd, 12, 15–25 odd, 29, 31, 41, 44 (in this section, ignore technology instructions: item **(d)** in Problems 9–31 and item **(b)** in Problems 41–44; instead, identify each extremal point as a local maximum or a local minimum), 47, 48, 51, 53

**4.4:** 1–3, 5, 6, 8, 11–21 odd, 25, 27, 29, 67–70

**4.5:** 1, 3–5, 7–9, 11, 14, 15, 20, 21a, 23, 57a, 58a

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

**4.8:** 27–51 odd, 55, 57, 61, 62, 89–95 odd, 96, 99, 102, 105, 107