

Do your homework! Learning mathematics is an active process - you cannot succeed just by listening or by watching someone else do problems. Time (at least 2 hours outside of class for every in-class hour) spent on going over your notes, reading your textbook and working exercises will help you clarify ideas and methods and discover points you don't understand. Check your answers in the back of the book. While doing your work outside of class, make notes about anything that you are having trouble understanding. **Be ready to ask questions about homework (or anything else) at the beginning of class, but do not ask questions about problems you have not tried.** Work with a classmate or two. Talk and listen as well as write when you study. Additional problems, such as classroom handouts, will also be assigned frequently.

If you miss a class, go to the course website to learn the current assignment and whether any important announcements were made in class. To get to the website, go to my home page at www.montgomerycollege.edu/~jriseber/ and click the link for MA 181. You should add the MA 181 site to your list of bookmarks or favorites, and check the site periodically, especially if you are late or absent.

Please turn over for answers to some of the assigned even-numbered problems

Section	Page	Assignment	Done (✓)
4.1	p. 267	1, 2, 3 -17 odd, 18, 19, 22, 25, 31, 33, 36 (Hint: Use Law of Cosines for #36)	
4.2 (a)	p. 274	1- 9 odd, 10, 11 - 19 odd, 23 - 35 odd	
(b)		39, 41, 45, 46, 47, 49, 51, 53, 58	
4.3	p. 287	1, 3, 4, 5, 6, 7, 11 - 23 odd, 29, 37, 38, 50	
4.4	p. 295	1, 3, 9, 27 (For #27, $f'(x) = \frac{2c}{x^3 e^{c/x^2}}$ and $f''(x) = \frac{2c(2c - 3x^2)}{x^6 e^{c/x^2}}$)	
4.6 (a)	p. 311	1 - 11, 19	
(b)		12, 13, 16, 21, 27, 28, 31, 33, 45a	
4.8	p. 325	1, 2, 3, 4, 5, 9, 11, 15, 19, 23, 26, 29	
4.9	p. 332	1 - 12, 13 - 41 odd, 46 For # 46, see Example 2 in pp. 202 - 203 for an explanation of the relationship between linear and mass), 47, 48 (In #48, to change mi/h into ft/s, multiply by 5280/3600. Why does this work?)	
5.1	p. 352	1a, 3, 5, 7, 9, 11, 15 Note: Use the program RIEMRECT for #7 and #9 only	
5.2 (a)	p. 364	1, 3, 5, 8, 9, 14, 15, 17, 19	
(b)		31, 32, 33, 34, 35, 37, 39, 40, 41, 43, 45	
5.3 (a)	p. 374	1 - 29 odd, 37, 38, 39, 41	
(b)		31, 33, 47, 49, 50, 55, 56, 57, 60, 61, 64, 66, 68	
5.4 (a)	p. 383	1, 3, 4, 5, 7, 9, 18, 19	

(b)		11, 13, 17	
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Answers

4.1/ 2. (a) $2pr \frac{dr}{dt}$ (b) $60pm^2/s$	4.1/ 18. $\frac{\sqrt{65}}{8} \approx 1.01m/s$
4.1/ 22. 289,253 cubic cm/min	4.1/ 36. 2.125 mi/h
4.2/ 10. f has no local maximum or minimum, but 2 and 4 are critical numbers	4.2/ 46. abs. max: $f(p) = p + 2 \approx 5.14$ abs. min: $f(-p/6) = -p/6 - \sqrt{3} \approx -2.26$
4.2/ 58. (a) $v(t) = 0.00146t^3 - 0.11553t^2 + 24.98169t - 21.26872$ (b) max. acceleration is about $64.5 ft/s^2$ and the min. acceleration is about $21.93 ft/s^2$	4.3/ 6. (a) (2,4) and (6,9) (b) local max. at $x = 4$, local min. at $x = 2$ and $x = 6$ (c) CU on (1, 3), (5,7) and (8,9) CD on (0,1), (3,5) and (7,8) (d) inflection points at $x = 1, 3, 5, 7, 8$
4.3/ 38. local max at $(-a, 4a^3)$, local min at $(-2a, 0)$, and $(a,0)$, inflection point at $(0, 2a^3)$	4.3/ 50. $a = \sqrt{e}/2$, $b = -1/8$
4.6/ 2. The two numbers are 50 and -50	4.6/ 4. absolute minimum: $f(1) = 2$
4.6/ 6. The dimensions are $10\sqrt{10}m$ by $10\sqrt{10}m$.	4.6/8. 2 cubic feet
4.6/ 10. The dimensions are 40 cm by 40 cm by 20 cm.	4.6/ 16. The dimensions are $4\sqrt{\frac{2}{3}}$ and $\frac{16}{3}$
4.6/ 28. (a) $v = \frac{3}{2}u$	4.8/2. $x_2 \approx 6.0$, $x_3 \approx 8.0$
4.8/ 26. Abs. min: $f(-0.450184) \approx -0.232466$	4.9/ 2. $x - \frac{1}{4}x^4 + 2x^6 + C$
4.9/ 4. $x^2 + \frac{10}{9}x^{2.7} + C$	4.9/ 6. $\frac{4}{7}x^{7/4} + \frac{3}{7}x^{7/3} + C$
4.9/ 8. $-\frac{1}{x^5} + \frac{2}{x^2} + 2x + C$	4.9/ 10. $3e^x + 7\tan x + C$
4.9/12. $\frac{1}{2}x^2 + x + \ln x + C$	4.9/46. 20 grams
4.9/ 48. 122.2 ft.	5.2/ 8. (a) 0.2 (b) 39.8 (c) 15.8
5.2/ 14. $L_{100} \approx 0.30607$, $R_{100} \approx 0.31448$	5.2/ 32. (a) 4 (b) $-2p$ (c) $4.5 - 2p$
5.2/34. $2p$	5.2/40. 0
5.3/ 38. $x \cos x$	5.3/ 50. Total bee population after 15 weeks
5.3/ 56. (a) $-10/3 m$ (b) $98/3 m$	5.3/ 60. 1800 liters
5.3/ 64. 28,320 liters	5.3/ 66. (a) $v(t) = 0.00146t^3 - 0.11553t^2 + 24.98169t - 21.26872$ (b) 206,407 ft
5.3/ 68. $b = \ln(3e^a - 2)$	5.4/ 4. (a) $g(-3) = g(3) = 0$ (b) $g(-2) \approx 3.5$, $g(0) \approx 5.5$ (c) g is increasing on $(-3,0)$

	(d) at $x = 0$
5.4/ 18. concave upward on $(-\infty, -\frac{1}{2})$	