

**Corrections for Part I of Calculus in Context.** Most of these involve the Problem Sets. They correct typos and errors and improve the wording and phrasing.

### Chapter 1

Page 35. Problem 1.22. Delete  $= \csc \theta$ .

Page 44. Problem 1.51. Change the Hint to: Use the law of cosines and the law of sines.

### Chapter 2

Page 76. Problem 2.34. Last line “0.6-foot height” not “1-foot height.”

### Chapter 3

Page 92, lines 11 and 12 from the bottom. In the sentence “The parallax ... 0.00001742 degrees” delete “in the position” and change “0.00001742” to “0.00008”

Page 111. Problem 3.5. On the first line insert “a” before “definitive” and on the next to last line replace “winter” by “autumn”.

Page 111. Problem 3.6. Replace “the planets” by “a planet”

Page 116. Interchange the symbols  $b_1$  and  $b_3$  in Figure 3.46 and in the inequality  $b_1 < b_2 < b_3$ .

Page 117. Problem 3.28. It should be “determine” not “detrmine”.

Page 118. Problem 3.32 line 5. Replace the second “falls” by “ground”.

Page 120. Problem 3.35 line 4. Replace “20, paces away—” by “20, paces—away”.

### Chapter 4

Page 151. Problem 4.7. Change “Chapter 10” to “Section 7.10”

Page 152. Problem 4.12. Change “equation  $-5x^2 + 3x - 4$ ” to “equation  $-5x^2 + 3x - 4 = 0$ ” and “considered Chapter 10” to “considered in Chapter 11”

Page 155. Reword Problem 4.38 as follows. After “Figure 4.33b has  $AB$  drawn in and has placed the segment  $CE$  parallel to  $AB$ .” insert “The product  $a \cdot b$  of the segments  $a$  and  $b$  is defined to be the segment  $BE$ . Switch to real numbers and let  $1, a$ , and  $b$  be the lengths of the segments  $OA, OB$ , and  $OB$ . Use the similarity of the triangles  $\triangle OAB$  and  $\triangle OCE$  to show that  $ab$  is equal to the length of  $BE$ . It follows that Descartes’s multiplication of segments agrees with the multiplication of real numbers.” (This ends Problem 4.38. Delete the rest.)

Page 156, the paragraph following Figure 4.33. Replace “Problem 4.40” by “Problem 4.39”

Page 159. Problem 4.67. In the first line it should be “semiminor axis”

Page 160. Problem 4.71. Replace  $25y^2$  by  $-25y^2$ .

Page 160. Problem 4.75. Replace  $+14$  by  $-14$ .

Page 160. The last problem of the set should be numbered 4.84.

### Chapter 5

Page 195. In the first equality after the statement “Austrian barrel satisfies” place a 2 before the  $\pi$  so that the equality reads “ $V = 2\pi \dots$ ”

Page 199. Problem 5.36. Change “of Problem 5.34.” to “of Problems 5.23 and 5.34.”

Page 201. Problem 5.45. The phrase “reasonably random” is confusing and should be

- deleted. In part i the sentence “This is the point  $P$  that minimizes the sum  $PA + PB + PC$ .” is superfluous and should be struck.
- Page 201. Problem 5.46. Change “of the equation  $y = \frac{1}{x^2}$ ” to “of the function  $f(x) = \frac{1}{x^2}$ ”
- Page 201. Problem 5.47. Change “of the equation  $y = \sqrt{x}$ ” to “of the function  $f(x) = \sqrt{x}$ ”
- Page 204. Problem 5.66. The stipulated length of the slanting segment as  $\frac{4}{3}r$  turns out to be too small. Take the length of the slanting segment to be  $\frac{\sqrt{33}}{4}r$  instead.

## Chapter 6

- Page 251. In line 4 replace “in the cases of  $x \pm 1$ ” by “in the cases  $x = \pm 1$ ”
- Page 256. Problem 6.29. Change “equations” to “equation”
- Page 258. At the beginning of the next to last paragraph of 6H. Newton’s Test Case: The Orbit of the Moon, insert “constant” after “gravitational”
- Page 258. Bottom of the page. Replace the fraction  $1\frac{19}{2}$  by  $1\frac{19}{20}$ .
- Page 260. Bottom of the page. It should say “wobble about the barycenter **B** in a monthly cycle.”