Errata list for *Methods for Euclidean Geometry*, as of November 1, 2016

NOTE: This list does not include (all of the) grammatical errors, as we have a separate list of those. Additional mathematical errors may be emailed to MethodsText@gmail.com .

p. 13, the statement of Playfair's axiom. There is a p that should be P. Right above, the "A" in axiom should be a little "a."

p. 40, Figure 3.19. There should not be the double "congruent" bars on segment P_3N_2.

p. 45, the proof of Theorem 4.19. The end of the first paragraph says, "This proves (a)." It should say, "This proves (1)."

p. 62, the end of the proof of (4) implies (1). It should say that those other three triangles are congruent to triangle DOQ instead of triangle COQ.

p. 81, the statement of Problem 4.1(b). It says that $PC = CD$ but this should be $PC = PD$.

p. 86, bottom of the page. The right side of the given equation should read $\frac{p}{q} \times \frac{r}{t}$.

p. 105, S5.1. The tenth word should be "others."

p. 130, S6.15. It should be point A that is inside of $\mathcal{C}$, not B, and the bisector should be $\overline{AB}$, not $\overline{AC}$.

p. 178, S8.13. The requirement for B_1 should be $B_1 \in \overleftrightarrow{AC}$, not line AB.

p. 179, Problem S8.14. The center of the circle does lie on the Newton line (line connecting the midpoints of the diagonals) but it is not necessarily the midpoint. Also, we should assume the quadrilateral is not a rhombus, else the Newton line does not even exist, as the midpoints coincide.

p. 241, near the bottom. The summation symbol is missing indexing notation.

p. 245, second line of Example 73. Segment CD should be segment BC.

p. 246, last line before the Problems. Specify that $i \neq j$.

p. 265, Example 76. The solution refers to Figure 76, but this should be Figure 12.9.

p. 271. Problem S12.8. We should not assume that triangle ABC is equilateral. Figure 12.13 should be adjusted accordingly.

p. 271, Problem S12.10. It should read, "Given three non-collinear points in the plane, find the locus ... "

p. 288, Problem 13.2. The second sentence should be, "Let M be the center of $\mathcal{C}$, ... "

p. 288, Problem 13.10. The statement is not quite right (which means the proof needs to be slightly revised, too). The problem should read as follows:

If AC is a longest side of triangle ABC and M is any point in the plane, then $AM + CM \geq BM$, with equality if and only if the triangle is equilateral and M is a point on the minor arc AB of the circumcircle of triangle ABC.

p. 289, Problem 13.15. There is a space missing after the word pentagon.

p. 313, solutions to Chapter 1. Two of the solutions are labeled as 1.3, so the last four solutions need to be renumbered.

p. 321, solution for Problem 3.2.10. In the 2nd line of the paragraph under the picture... "Thus, $A'M/AM = B'M/BM = 2$..." The 2 should be a 1/2.

p. 332, solution of Problem 3.3.2. It says "select E on segment CD" but E is actually on segment AD. (See Figure 24(i).)

p. 339, solution for Problem 4.1(a). Wrong answer! It should be, $PA \cdot PB = PC \cdot PD$, so $4 \cdot 12 = 1/2(PD)^2$. Therefore, $PD = \sqrt{96} = 4\sqrt{6}$.

p.355, solution for Problem 4.26. The fourth line should be $\triangle O_1O_2O_3$, not $\triangle ABC$.

p. 360, solution to 5.10(b). The last sentence of Solution 1 should say "There is no rectangle with largest perimeter."

p. 370, line 4. Add this phrase to the end of the line: "in radian measure,"

p. 372, solution of Problem 5.29. In the second paragraph, "i.e., $m\angle ABC < 60°$ and $m\angle BAC > 60°$," should be "i.e., $m\angle ACB < 60°$ and $m\angle BAC > 60°$."

P. 373, solution to problem 6.2. Solution 2 says that $MC = \sqrt{(x/2 + y/2)^2} = c/2$. This should be $MC = \sqrt{(x/2)^2 + (y/2)^2} = c/2$.

p. 400, Figure 116. The y-coordinates of points B, C, and D should each be multiplied by 2.

p. 414, Solution to Problem 9.18. The parabola should have equation $y = x^2/4$. This causes other parts of the problem to change. In particular, $x_m = 2m$ and the resulting locus is a parabola with equation $y = 1 + x^2/2$.

p. 419, 10.6. Put comma after (7).

p. 426, Figure 128. The centers of the squares are clearly labeled incorrectly.

p. 427, Line 4. It should say, "As $z_1 = z_2 i$, the segments ... "

p. 436, Solution to Problem 12.4. Figure 137 should have point A labeled as A'.

p. 437, solution to Problem 12.7. In the first sentence of the third paragraph, there is a reference to O', it that should be G'.

p. 437, last sentence of the solution to 12.7. Triangle $A_1B_2C_2$ should be $A_2B_2C_2$.

p. 445, solution to Problem 13.10. The proof needs to be slightly revised to accommodate the change we suggest (above) in the problem statement.

p. 447, third paragraph after Figure 149, line 2. It should be $\triangle AB'P_1' \cong \triangle W'B'P_1'$. (not $=$)

p. 453. In the bibliography, [64] should have Wallace, not Wallance.