1 CORRECTIONS

pp. 1-8 (Courtesy of Robert J. MacG Dawson): The existence of spherical triangles needs more careful treatment in Section 1.1. The reader might be pardoned for thinking that Prop. 1.1.5 is a sufficient condition as well as necessary - and it is not. In particular, I have $10 that says you can’t solve your own Exercise 1.1.2(c).

The missing condition is obtained by extending any pair of edges (say $AB$, $AC$) till they meet again at the antipodal point $A'$ of $A$. The triangle $A'BC$ must also have $\alpha + \beta + \gamma > \pi$, whence $\alpha + (\pi - \beta) + (\pi - \gamma) > \pi$. We then get $\alpha + \pi > \beta + \gamma$ and two other corresponding inequalities.

We get this also by setting the RHS of Prop. 1.1.2(ii) to be less than 1 and solving. (Doing the same thing to Prop. 1.1.2(i) we get the triangle inequality.) Conversely, if we *do* have all these inequalities (and all angles under $\pi$) we can solve the triangle.

p. 8 Exercise 5b: Replace $\beta = 120^\circ$ with $\alpha = 100^\circ$.

p. 8 Exercise 5c: Replace $100^\circ$ with $120^\circ$.

p. 8 Exercise 6c: Replace 140 with 125.

p. 8 Exercise 6d: Replace 140 with 125.

p. 13 Proposition 1.2.2(i): Replace $\cos c$ with $\cosh c$.

p. 17 Figure 1.17: That should be $\frac{dy}{y}$

p. 50 lines -11, -14: Postulate 3 (not 4).

p. 64 line 4: Replace $mc$ with $m_c$.

pp. 87- : Remove double arrows from Propositions 29 and 30.

p. 89 Exercise 12: ...internal bisectors...

p. 91 line 4: Replace 3.1.1 with 2.3.35.

p. 124 Proposition 3.5.6: ...if and only if ...

p. 146 Exercise 13: ... perpendicular chords...

p. 147: Prop 4.2.7 is not the first concurrence theorem in the book; that would be 3.1D.11 or possibly 3.1A.12.
CORRECTIONS

p. 155 Exercise 8: Replace "calculating device" with "either MAPLE or Mathematica or some similar application,"

p. 160 line 6: Misplaced left parenthesis. Should be

\[ \left( \frac{a_n}{2} \right)^2 + \left( 1 - \sqrt{1 - \left( \frac{a_n}{2} \right)^2} \right)^2 \]

p. 160 Proposition 4.4.7: If \( a_n \) denotes the length of the side of the regular polygon...

p. 169 line 9: Replace "lead" with "led".

p. 171 line 10: Replace "-(1/8)" with "+(1/8)"

p. 178 Proposition 5.1.1 should read: Given two distinct points A and B ...

p. 184 Proposition 5.2.1: Replace \( QB \) with \( QC \) twice.

p. 225: Insert \( \rho v \) into the description of \( \Gamma_7 \).

p. 226: Insert \( \rho v \) into the description of \( \Gamma_7 \).

p. 235: The labels \( p_{31}m \) and \( p_{3}m_{1} \) are switched.

p. 246: The headings "Reflections" and "Nontirivial Glide-Reflections" are switched.

p. 272: Prisms and antiprisms have all the properties used to define "semiregular polyhedra", and should be included besides the 13 "Archimedean polyhedra".

p. 272: Only one semiregular polyhedron (the cuboctahedron) is mentioned by Plato.

p. 273: Figure 8.2. "I am not sure that "microbe" is the right term to use here - these are supposed to be diatoms. However, I believe that it has been established that most of the drawings presented by Haeckel were the product of his fertile imagination, and do not correspond to actual diatoms or any other creatures." (Courtesy of Branko Grunbaum)

p. 278 Exercise 5(f): Replace \( d \) with "3".

p. 279 Exercise 11: Replace "do not" with "do".

p. 293 Exercise 2: Insert "a type II" before "truncation".
p. 293 Exercise 7: Add "(when embedded in \( \mathbb{R}^3 \))" after \( n \)-gon.

p. 301 line -1: ...in Figure 9.15...

p. 405: The "Hide" command in Geometer’s Sketchpad does not erase the object; it hides it. To "erase" one needs to select and use the "delete" command.

p. 436 EXERCISES 3.1C: Change "6", "14", "15" to "7", "15", "16", respectively.