1. 8.1 (First sentence only; ignore the part about diameters.)

2. 8.2

3. 8.6

4. 8.7

5. In the upper half plane model, find a hyperbolic transformation that takes the imaginary axis to the upper unit circle. Then find an infinite sequence of equally spaced (in the hyperbolic sense) points on the upper unit circle.

6. For ai, bi, and ci on the imaginary axis with $a < b < c$, show that

$$d_H(ai, ci) = d_H(ai, bi) + d_H(bi, ci).$$

Conclude that part (3) of the first theorem on page 97 is true.