4   LEVELING THEORY, METHODS, AND EQUIPMENT

4.1   Define the following leveling terms: (**a**) vertical control, (**b**) elevation, and (**c**) vertical datum.

From Section 4.2:

(**a**) A series of benchmarks or other point of known elevation established throughout an area.

(**b**) The distance along a vertical line from a vertical datum to a point or object.

(**c**) Any level surface to which elevations are referenced.

4.2*   How far will a horizontal line depart from the Earth's surface in 1 km? 5 km? 10 km? (Apply both curvature and refraction)

1 km? $C_m = 0.0675(1)^2 = 0.068$ m

5 km? $C_m = 0.0675(5)^2 = 1.688$ m

10 km? $C_m = 0.0675(10)^2 = 6.750$ m