

## 5 LEVELING — FIELD PROCEDURES AND COMPUTATIONS

Asterisks (\*) indicate problems that have answers given in Appendix G.

**5.1** What errors are eliminated by keeping the lengths of the plus and minus sights equal?

From Section 5.4: Balancing plus and minus sights will eliminate errors due to instrument maladjustment and the combined effect of Earth curvature and refraction.

**5.2** Why should sight lines be kept at least 0.5 m from any surface?

From Section 5.12.2: "Air boiling or heat waves near the ground surface or adjacent to heated objects make the rod appear to wave and prevent accurate sighting. Raising the line of sight by high tripod setups, taking shorter sights, avoiding any that pass close to heat sources (such as buildings and stacks), and using the lower magnification of a variable-power eyepiece reduce the effect."