

Exercises — Geometry: areas and volumes

1. A goat is tied to the corner of a shed 12 feet long and 10 feet wide. The rope is 15 feet long. Over how many square feet can the goat graze?
2. A cube and a rectangular solid are equal in volume. If the lengths of the edges of the rectangular solid are 4, 8, and 16, what is the length of an edge of the cube?
3. The Mythbusters (ep. 21, Nov. 3, 2004) found that it took 3500 helium-filled balloons to lift a small child. The balloons were approximately spherical with a radius of 5 inches. Suppose balloons with radius 10 inches had been used instead. How many balloons would have been needed to lift the child?