1. How many cubic yards of loam will it take to cover a quarter of an acre of land 2 in. thick?

2. How many yards of carpeting 30 in. wide will it take to cover a floor 12 ft. square? Allow for waste in laying.

3. If 30 cubic feet of air are required for each pupil every minute, how many cubic feet will be required for 40 pupils during an hour's time? How long must a closed school-room 25 ft. wide and 12 ft. high be to contain a sufficient amount of good air for 20 pupils? Give a similar problem, using the metric system.

4. The measured thickness of 5 sheets of paper is .44^{mm}. An unknown number of sheets measures 2.19^{mm} in thickness. How many sheets are there? How high a pile would 10 reams make?

5. A piece of copper wire 17.6^{cm} long weighs 420^{mg}. A piece of the same wire so twisted that its length cannot be measured weighs 6.9^{g}. How long is it? If copper is 8.78 times as heavy as an equal bulk of water, what is the diameter of the wire?

6. In the Fahrenheit thermometer the freezing point is 32° and the boiling point is 212°. In the Centigrade the freezing point is zero and the boiling point is 100°. 1° C. equals how many degrees Fahrenheit? 1° F. equals how many degrees Centigrade? What degree Centigrade corresponds to 42° F.? to 77° F.? What degree Fahrenheit corresponds to 20° C.? to 35° C.?

7. The temperature of the blood is about 100° F. What is it Centigrade?

8. A school-room should be 68° F. How many degrees Centigrade?

9. A floating body displaces its own weight of water. If a cubic foot of water weighs 62½ lb., how many cubic feet of water will be displaced by a ship and cargo weighing 1200 tons? weighing 16,000 tons?

10. A vessel has the shape of the frustum of a cone 4 in. high, and the diameters of the bases are 8 in. and 6 in. How many gallons of water will it hold?

11. A pan in the form of a frustum of a cone is 14 in. in diameter at the bottom, and 9 in. in diameter at the top, and is 5½ in. high. How many quarts of berries will it hold?