

7. 1848 cu. in. (Measure of the vol. = measure of area of end multiplied by measure of height).
 8. 55440 cu. in. = $32\frac{1}{2}$ cu. ft. 9. 20790 cu. in.
 10. 770 cu. ft. 11. 2079 cu. ft. 12. $962\frac{1}{2}$ cu. ft.
 13. 7 in. $\left(\text{Since vol.} = \pi r^2 h; \therefore r = \sqrt{\frac{\text{Vol.}}{\pi h}} \right)$.
 14. 11 in. 15. 7 ft. 16. $3\frac{1}{2}$ ft. 17. $10\frac{1}{2}$ ft.
 18. 14 ft.

Exercise 179. Page 189

1. 14 in. (Curved surface = $\pi d h$). 2. 66000 sq. ft.
 3. 6600. 4. \$24.75. 5. 1 ft. 4 in. (No. sq. ft. = 88;
 circum. = $\frac{88}{21}$ ft.; dia = $\frac{88}{21} \times \frac{7}{2}$ ft.).
 6. $19\frac{1}{4}$ ft. [Vol. copper = $\frac{2}{7} \times \frac{7}{2} \times \frac{7}{2} \times 12$ cu. in. = 462 cu. in.
 Length = $\{462 \div (8 \times \frac{1}{4})\}$ in. = 231 in.]. 7. 6912.
 8. \$220. 9. 3019 $\frac{1}{2}$ lb. 10. $848\frac{1}{4}$ cu. ft.

Exercise 180. Page 189

1. $3\frac{3}{4}$ ft. board measure. (Average width = 9 in.).
 2. 7 sq. in. = $\left(\frac{3+4}{2} \right) \times 2$ sq. in. 3. $35\frac{1}{16}$ tons.
 4. $282\frac{6}{7}$ cu. ft. 5. $57042\frac{6}{7}$ cu. ft. (Dia. = 5 ch. = 20 rd. = 330 ft.).
 6. $12305\frac{7}{10}$ t. 7. \$303. 8. $186\frac{3}{8}\frac{5}{8}\frac{8}{7}$ bu. 9. 12031250 gal.
 10. 80 ft. (Area of triangle = $\frac{1}{2}$ area of rectangle of same base and height).
 11. 916.5 ... sq. rd. (Altitude = $\sqrt{(50)^2 - (20)^2}$ rd. = $\sqrt{2100}$ rd. = 45.825 ... rd.).
 12. 16.85 ... ft. = $\sqrt{(72)^2 - (70)^2}$ ft.
 13. 1452 sq. ft. (When the sides are 3 ft. and 4 ft., the diag. is 5 ft.; $\therefore$ sides are 33 ft. and 44 ft.).
 14. 7.07 ... in. (Diag. of sq. = 10 in.; $2(\text{side})^2 = (10)^2$; $\therefore$ side = $\sqrt{50}$ in.).
 15. 43.08 ... ft. = $\sqrt{(32)^2 + (24)^2 + (16)^2}$ ft.
 16. \$18. (Per. of sq. field = 320 rd.; area = 40 ac.; length of rect. field = 100 rd.; width = 64 rd.; per. = 328 rd.).