

ARTICLE 70.

Cubic Measure.

1. Reduce 100 cords 100 cu. ft. to cubic feet.
2. Reduce 2 cords 1 cu. ft. 348 cu. in. to cubic inches.
3. Reduce 10 cu. yds. 19 cu. ft. 608 cu. in. to cubic inches.
4. Reduce 75 cords 12 cu. ft. to cubic yards.
5. Reduce 5 cords 50 cu. ft. 500 cu. in. to cubic inches.
6. Reduce 1166400 cu. in. to cubic yards.
7. Reduce 10625 cu. ft. to cords.
8. Reduce 436455 cu. in. to cubic yards.
9. Reduce 151 cu. yds. 19 cu. ft. to cords.
10. Reduce 2764800 cu. in. to cords.
11. How many cubic yards of excavation in a cellar 33 ft. long, 21 ft. wide and 6 ft. deep?
12. A marble slab is 54 in. long, 32 in. wide, and 3 in. thick. What is its value, at \$6.25 a cubic foot?
13. How many cords of wood in a pile 160 ft. long, 12 ft. wide, and 10 ft. high?
14. How many bars of soap, each 6 in. long, 3 in. wide, and 2 in. thick, can be packed in a box whose inside measurement is 18 in. by 15 in. and 10 in. deep?
15. How many headstones, each 4 ft. long, 2 ft. wide, and 4 in. thick, would be equal in volume to a block of marble 8 ft. long, 4 ft. wide, and 3 ft. thick?
16. A street 1620 ft. long, and 50 ft. wide, is to be graded to a depth of two feet. What will the excavation cost, at \$0.125 a cubic yard.
17. A squared log is 24 ft. long, and 2 ft. square at the ends. How many boards 12 ft. long, 1 ft. wide, and 1 in. thick, can be sawn from it?
18. How many cubical blocks, whose edges are three inches in length, can be placed in a cubical box whose depth is 18 in.

19. A tank is 11 ft. long, 4 ft. wide, and 3 ft. 6 in. deep. How many gallons will it hold, allowing 231 cu. in. to the gallon?

20. A bin is 10 ft. long, 5 ft. wide, and 3 ft. 7 in. deep. How many bushels of wheat will it contain, allowing 2150 cu. in. to the bushel?

NOTE—Employ Cancellation in the Solution of the following.

21. A pile of wood is 64 ft. long, 8 ft. wide, and 9 ft. high. How many cords does it contain?

22. A cellar is to be 45 ft. long, 24 ft. wide, and 7 ft. deep. How many cubic yards of earth must be removed?

23. How many cubical toy-blocks, two inches in length, can be packed in a box 3 ft. long, 2 ft. wide, and 1 ft. high.

24. How many posts, 4 in. square and 6 ft. long, could be sawed from a log 2 ft. square at the ends, and 24 ft. long.

25. Find the cost of a pile of wood 88 ft. long, 8 ft. wide, and 10 ft. high, at \$4.25 a cord.

26. What would it cost to dig a ditch 432 ft. long, 3 ft. deep, and 4 ft. wide, at 17 cts. 5 mills a cubic yard?

27. A granary, 43 ft. long, and 10 ft. wide, is filled with wheat to a depth of 5 ft. What is the value of the wheat, at 87 cts. 5 mills per bushel, allowing 2150 cu. in. to the bushel?

28. A rectangular block of marble, 6 ft. long, 4 ft. wide, and 3 ft. thick, was sawn into slabs 36 in. long, 24 in. wide, and 3 in. thick, which were sold at \$7.50 apiece. What was received for them?

29. A reservoir is 22 ft. long, 14 ft. wide, and 6 ft. deep. How many gallons will it hold, allowing 231 cu. in. to a gallon?

30. How many planks, 10 ft. long, 10 in. wide, and 1 in. thick, could be sawn from a log 20 in. square and 20 ft. long?

31. How many dozen oyster-cans, each 6 in. long, 5 in. wide, and 2 in. deep, can be packed in a box 40 in. long, 24 in. wide, and 18 in. deep?

32. How many starch-boxes, each 28 in. long, 16 in. wide, and 8 in. high, could be placed in a car 35 ft. long, 8 ft. wide, and 7 ft. high (inside measurement)?

33. A kiln of brick was 80 ft. long, 30 ft. wide, and 10 ft. high. If each brick was 8 in. long, 4 in. wide, and 2 in. thick, what was the value of the kiln, at \$10 per thousand.

34. A reservoir is 280 ft. long, 198 ft. wide, and 49 ft. deep. How long would it require a pipe discharging 288 gal. per minute to fill it, allowing 231 cu. in. to the gallon?

ANSWERS.

ARTICLE 70.

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| 1. 12900 cu. ft. | 10. 12 cords 64 cu. ft. | 22. 280 cu. yds. |
| 2. 444444 cu. in. | 11. 154 cu. yds. | 23. 1296 blocks. |
| 3. 500000 cu. in. | 12. \$18.75. | 24. 144 posts. |
| 4. 356 cu. yds. | 13. 150 cords. | 25. \$233.75. |
| 5. 1192820 cu. in. | 14. 75 bars | 26. \$33.60. |
| 6. 25 cu. yds. | 15. 36 headst. | 27. \$1512. |
| 7. 83 cords 1 cu. ft. | 16. \$750. | 28. \$360. |
| 8. 9 cu. yds. 9 ft. 999 cu. in. | 17. 96 boards. | 29. 13824 gal. |
| 9. 32 cords. | 18. 216 blocks. | 30. 80 planks. |
| | 19. 1152 gal. | 31. 24 doz. |
| | 20. 144 bu. | 32. 945 boxes. |
| | 21. 36 cords. | 33. \$6480. |
| | | 34. 7 weeks. |