

1. How many figures has the third power or cube of the smallest number of one figure? of the largest number of one figure? of the smallest number of two figures? of the largest number of two figures? of the smallest number of three figures? of the largest number of three figures? From these facts deduce a rule for finding the number of figures in the cube root of a number.

2. How many figures in the cube root of 13,824? of 1,404,928? of 941,192?

3. Name the cubes of numbers from 1 to 12 inclusive.

4. What is the greatest cube that can be found in 30? in 100? in 500? in 1000? in 1500? in 1800?

5. If the cube root of a number consists of tens and units ($t+u$), what must the power be? What is $(t+u)^3$? Can you reduce this quantity to the equivalent expression $t^3 + (3t^2 + 3t \times u + u^2) \times u$?

6. By the aid of the formula, extract the cube root of 12,167.

$$\begin{array}{r}
 t+u \\
 t^3 + (3t^2 + 3t \times u + u^2) \times u = 12,167 \quad | \quad 2 \quad 3 \\
 \quad \quad \quad t^3 = 8,000 \\
 \quad \quad \quad 3t^2 = 1,200 \quad | \quad 4,167 = (3t^2 + 3t \times u + u^2) \times u \\
 \quad \quad \quad 3t \times u = 180 \\
 \quad \quad \quad u^2 = 9 \\
 \hline
 3t^2 + 3t \times u + u^2 = 1,389 \quad | \quad 4,167 = (3t^2 + 3t \times u + u^2) \times u
 \end{array}$$

The cube of tens gives thousands. The greatest cube that can be found in 12,000 is what? Subtracted from 12,167 is what? This remainder is equal to what? How may the units figure be approximately found? The complete divisor is what? What result after multiplying this divisor by the units? What remainder? What is the conclusion?

In the same way extract the cube root of :

7. 512,000.	11. 314,432.	15. 103.823.	19. 47,437,928.
8. 32,768.	12. 250,047.	16. 35.937.	20. 71,473,375.
9. 68,921.	13. 970,299.	17. 2048.383.	21. 105,154,048.
10. 91,125.	14. 912,673.	18. .704969.	22. 736,314,327.