

147. Higher roots than the square and cube can sometimes be extracted by means of the Rules for square and cube root; thus the 4th root is found by taking the square root of the square root; the 6th root by taking the square root of the cube root, and so on.

Ex. LXXVIII.

Find the cube roots of

- (1) 1728; 8000; 5832.
- (2) 74088; 421875; 778688.
- (3) 912673; 1032727.
- (4) 134217728; 64481201.
- (5) 444194947; 000202262003.
- (6) 131019108039; 408518488000.

Find the cube roots, to three places of decimals in those cases where the root does not terminate, of

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| (7) $\frac{27}{64}$. | (8) $\frac{1}{16}$. | (9) $3\frac{1}{8}$. | (10) 1. |
| (11) .1. | (12) .01 | (13) 10. | (14) .037 |

MISCELLANEOUS QUESTIONS.

Ex. LXXIX.

PAPER I.

1. Subtract 2057312 from 5287201, and 2057312 again from the remainder. Explain how this is the same as dividing 5287201 by 2057312.
2. (1) Reduce 553553 oz. to tons, cwts., &c. (cwt. = 112 lbs.) (2) Find the proportions of the Avoird. and Troy oz., when the respective lbs. are as 175 : 144.
3. Find, by Practice, the cost of 16 cwt., 3 qrs., 16 lbs. at £2. 7 cents a cwt., (112 lbs. = cwt.) £1 being = 10 florins = 100 cents = 1000 mils.
4. Define (1) the G. C. M., (2) the L. C. M., of two or more numbers, (3) a Vulgar Fraction. Find the G. C. M. of 20803 and 67273; and the L. C. M. of 8, 9, 10, 12, 15, 18, 35 and 84.
5. (1) Add together $\frac{2}{3}$ of $\frac{1}{4}$ of $99\frac{1}{2}$, $\frac{1}{2}$ of $\frac{2}{3}$ of $69\frac{3}{4}$, $\frac{3}{4}$ of $\frac{2}{3}$ of $806\frac{1}{2}$. (2) Express 13s. $1\frac{1}{2}$ d. as the fraction of $\frac{1}{4}$ of $1\frac{1}{2}$ guinea. (3) Find the value of $1\frac{1}{2}$ ton (cwt. = 112 lbs.).