

CUBE ROOT.

141

Ex. 6. Find the square root of $\frac{5}{7}$ to 3 places of dec^{ls}.

$$\sqrt{\frac{5}{7}} = .845...$$

$$.714285 (.845...$$

$$\begin{array}{r} 64 \\ 164 \overline{) 742} \\ \underline{656} \\ 1635 \overline{) 8685} \\ \underline{8425} \\ 260 \end{array}$$

$$\therefore \text{sq. root of } \frac{5}{7} = .845...$$

Ex. LXXVII.

Find the square roots of (1) 196; 289; 625. (2) 841; 900; 1764. (3) 2401; 7569; 9604. (4) 12321; 40000; 388129. (5) 494209; 582169; 259081. (6) 1234321; 28547649. (7) 62504836; 33016516; 49112064. (8) 182493081; 4761. (9) 008836; 445336609. (10) 000633679929; 0000000009.

Find the square roots, each to four places of decimals, of (11) 51; .51. (12) 5.1; .051. (13) 806.52; 96304.993.

Find the square roots, each to 3 places of decimals where the root does not come out exactly, of (14) $\frac{3}{4}$. (15) .027.

$$(16) 4\frac{1}{4}. \quad (17) \frac{2304}{3481}. \quad (18) \frac{4.41}{.64}.$$

(19) A father left his child a box, containing sovereigns, and shillings; the sovereigns were worth as many times the shillings, as the shillings were worth the box; the value of the box was 2s. 6d., and there were 5832 sovereigns in the box. How many shillings were there?

CUBE ROOT.

144. The CUBE of a given number is the product which arises from multiplying that number by itself, and then multiplying the result again by the same number. Thus $6 \times 6 \times 6$, or 216, is the cube of 6; or $216 = 6^3$. Art. 86.

145. The CUBE ROOT of a given number is a number, which, when multiplied into itself, and the result again multiplied by it, will produce the given number. Thus 6 is the cube root of 216; for $6 \times 6 = 36$, and $36 \times 6 = 216$.

The cube root of a number is sometimes denoted by plac-