

(3) Sugar being composed of 48.856 per cent. of oxygen, 43.265 per cent. of carbon, and the rest hydrogen; how many lbs. of each of these materials are there in 1 ton of sugar?

(4) Archimedes discovered that the crown made for King Hiero consisted of gold and silver in the ratio of 2 : 1. How much per cent. was gold, and how much per cent. was silver?

(5) Find the equated time of payment of \$150 due in 2 mo., \$210 due in 6 mo., and \$120 due in 7 mo.

(6) *A* owes *B* \$1000 to be paid at the end of 6 mo.; *A* pays \$400 at the end of 3 mo.; when ought he to pay the remainder?

(7) *A*, *B*, and *C* remained partners for 2 years; *A* brought in \$4000, which remained the whole time; *B* began with \$300, and 6 months after put in \$300 more; *C* began with \$200, and one year after put in \$500 more. The whole gain was \$7960. Determine each partner's share.

(8) *A* is a working, *B* a sleeping partner in a bookseller's business. Their capital amounts to £6400; of which £2400 belongs to *A*, the rest to *B*. Their profits, at the end of the first year, amounted to £1600. *A* receives 10 per cent. of the profits for managing the business. How ought the remaining part of the profits to be divided?

(9) *A*, *B*, and *C* rent a field for \$60; *A* puts in 20 horses, *B* 15 oxen, and *C* 10 sheep; supposing the keep of a horse, ox, and sheep to be in the ratio of 3, 2, and 1; shew how the rent should be divided.

(10) Some broth was distributed among a certain number of old men, 9 widows, and 6 single women; the men had twice as much broth given among them as was given among the women; also an old man's share was to a widow's share :: 6 : 5, and a widow's share to a single woman's share :: 10 : 9. Each single woman received $1\frac{1}{2}$ pints. How many old men were there?

SQUARE ROOT.

141. The SQUARE of a given number is the product of that number multiplied by itself. Thus 6×6 or 36 is the square of 6, or $36 = 6^2$. Art. 86.

142. The SQUARE ROOT of a given number is a number