

98. To change a common to a decimal fraction.

1. Reduce $\frac{3}{8}$ to a decimal.

Rule.—*Annex decimal ciphers to the numerator, and then divide by the denominator; pointing off as in division of decimals.*

$$\begin{array}{r} \text{OPERATION.} \\ 8 \overline{) 3.00} \\ \underline{.375} \end{array}$$

Examples.

1. Reduce $\frac{1}{2}$ to a decimal fraction.
 2. Reduce $\frac{5}{8}$ to a decimal fraction.
 3. Reduce $\frac{2}{5}$, $\frac{5}{16}$, and $\frac{9}{15}$ to decimal fractions.
 4. What decimal fraction is equal to $\frac{16}{25}$?
 5. What decimal fraction equals $\frac{21}{24}$?
 6. Reduce $\frac{11}{32}$ to a decimal fraction.
 7. Reduce $\frac{7}{40}$ and $\frac{2}{3}$ to decimal fractions.
 8. Change $\frac{17}{50}$ and $\frac{16}{80}$ to decimal fractions.
 9. Express $\frac{2}{5}$, $\frac{6}{16}$, and $\frac{9}{80}$ in decimal fractions.
 10. Reduce $\frac{240}{1250}$ and $3\frac{7}{8}$ to decimals.
 11. Reduce $\frac{16}{975}$ and $\frac{36}{450}$ to decimals.
 12. Reduce $\frac{5}{160}$, $\frac{16}{90}$, and $\frac{17}{200}$ to decimals.
99. To change a decimal to the form of a common fraction.
1. Change .88 to the form of a common fraction.

Rule.—*Write the denominator of the decimal, and reduce the fraction to its lowest terms.*

$$\begin{array}{r} \text{OPERATION.} \\ .88 = \frac{88}{100} = \frac{44}{50} = \frac{22}{25} \end{array}$$

Examples.

1. Change .47 to the form of a common fraction.
2. Change 4.69 to the form of a common fraction.
3. Change 3.004 to the form of a common fraction.
4. Change 64.0049 to the form of a common fraction.
5. Change 87.490 to the form of a common fraction.

UNITED STATES CURRENCY.

100. CURRENCY is the money of a country, established by law. It is composed of paper money and coins.

Coins.

101. COINS are pieces of metal, whose values are fixed by law.

The coins of the United States are the following:

1. Gold: Eagle, double-eagle, half-eagle, three-dollars, quarter-eagle, dollar.
2. Silver: Dollar, half-dollar, quarter-dollar, dime, half-dime, and three-cent piece.
3. Copper: Cent, half-cent.
4. Nickel: Cent.

102. The DOLLAR is the unit of United States Currency. It is divided decimally, for the denominations which are less than a dollar, and multiplied by 10 for those which are greater, according to the following

Table.

10 Mills (m.)	.	make	1 Cent,	.	marked	ct.
10 Cents	.	"	1 Dime,	.	"	d.
10 Dimes	.	"	1 Dollar,	.	"	\$.
10 Dollars	.	"	1 Eagle,	.	"	E.

Hence, a dime is *one-tenth* of a dollar; a cent, *one-tenth* of a dime; and a mill, *one-tenth* of a cent. Therefore, in writing,

The dollars fall at the left of the decimal point, the

dimes in the first place at the right of it, the cents in the second place, and the mills in the third place. Thus,

\$ 4 . 8 7 5

expresses, 4 dollars, 8 dimes, 7 cents, and 5 mills. But the dimes are generally read with the cents; thus we say, four dollars 87 cents and 5 mills. If there are no dimes, the 0 occupies the dimes' place.

Express the following sums of money decimally:

1. Five dollars 4 dimes and 3 cents.
2. Twenty-seven dollars 6 dimes and 7 cents.
3. Forty dollars 8 dimes 2 cents and 9 mills.
4. Thirty dollars forty-three cents, and 2 mills.
5. One hundred and five dollars 6 dimes 4 cents and 4 mills.
6. Three dimes 7 cents and 8 mills.
7. Sixty-five cents and 7 mills.
8. One dollar one cent and one mill.
9. Twenty-five cents.
10. Three dollars and seventy-five cents.
11. Eight cents and eight mills.
12. Twelve dollars twelve cents and nine mills.
13. Nine mills.
14. Two cents and two mills.
15. Sixty dollars and five cents.
16. Forty-nine dollars four dimes and six mills.
17. Two hundred dollars eight dimes and three cents.

Read the following numbers:

\$5.625 ; \$16.147 ; \$23.492 ; \$72.169 ; \$1.196.
 \$1.064 ; \$.75 ; \$.045 ; \$.006 ; \$.107.
 \$67.041 ; \$30.470 ; \$.047 ; \$87.401 ; \$61.414.

REDUCTION.

103. REDUCTION is the operation of changing the unit of a number, without altering the value of a number.

104. To reduce from a greater unit to a less.

1. In 5 dollars, how many dimes, how many cents, and how many mills?

Rule.—I. To change from any denomination to the next less, multiply by 10. OPERATION.
 $\$5 = 5 \times 10 = 50$ dimes.

II. To change from any denomination to the second less, multiply by 100.
 $\$5 = 50 \times 10 = 500$ cents.
 $\$5 = 500 \times 10 = 5000$ mills.

III. To change from any denomination to the third less, multiply by 1000.

NOTE.—If there be no decimal point in the number, perform the operation by annexing ciphers. If there is a decimal point, observe the rule for multiplying a decimal by 10, 100, or 1000.

Examples.

1. Reduce \$15.25 to cents. Ans. 1525.
2. Reduce \$47.375 to mills. Ans. 47375.
3. How many dimes are there in \$96?
4. How many cents are there in \$87.50?
5. In 7 dimes, how many mills are there?
6. Reduce \$160 to dimes; to cents; and to mills.
7. Reduce \$3.03 to dimes; to cents; and to mills.
8. Reduce \$16 to cents; and to mills.
9. Change \$10.109 to dimes; to cents; and to mills.
10. Change \$400.754 to dimes; to cents; and to mills.
11. Change \$7.046 to dimes; to cents; and to mills.
12. Change \$12.419 to dimes; to cents; and to mills.

105. To change from a less unit to a greater.

1. Reduce 4672 mills to dollars, cents, and mills.

Rule.—I. To change from any denomination to the next higher, divide by 10:

$$\begin{array}{r} \text{OPERATION.} \\ 10 \overline{) 4672} \end{array}$$

II. To change from any denomination to the second higher, divide by 100:

$$\begin{array}{r} 10 \overline{) 467.2} \text{ dimes.} \\ 10 \overline{) 46.72} \text{ cents.} \\ \hline \$4.672 \end{array}$$

III. To change from any denomination to the third higher, divide by 1000.

Examples.

1. Reduce 5672 cents to dollars.
2. Change 72356 mills to dollars.
3. Reduce 3674 mills to dollars.
4. Reduce 12745 cents to dollars.
5. Change 26945 cents to dollars.
6. In 649 dimes, how many dollars?
7. How many dimes are there in 2469 mills?
8. How many dollars are there in 476 dimes?
9. Reduce 57 cents to dollars.
10. How many dollars and cents are there in 157 cents? How many in 75 cents? In 127 cents?
11. How many dollars, cents, and mills are there in 6749 mills? How many in 37049 mills?
12. In 40409 mills, how many dollars, cents, and mills? How many in 904607 mills?
13. How many dollars, cents, and mills in 10460 mills? In 270460 mills, how many?
14. How many dollars, cents, and mills are there in 874904 mills? In 47049 mills, how many?

ADDITION.

106. ADDITION OF UNITED STATES MONEY is performed in the same manner as addition of decimals.

1. What is the sum of \$37.027, \$12.49, and \$15.379?

Rule.—Write the numbers so that units of the same value shall fall in the same column, and then add as in decimal fractions.

$$\begin{array}{r} \text{OPERATION.} \\ 37.027 \\ 12.49 \\ 15.379 \\ \hline \end{array}$$

Proof.—Same as in decimals.

$$\$64.896$$

Examples.

Add the following:

1. 16 dollars 15 cents 7 mills; \$16.25, and \$19.004.
2. 17 dollars 4 dimes 6 cents; \$25 19 cents 6 mills; and \$75 and 25 cents.
3. \$16.125 + \$296.875 + 75 cents + 10 dollars 16 cents 3 mills.
4. \$96.476 + \$179.06 + 37½ cents + 18¾ cents + \$1.956.
5. \$2716.149 + 17 cents 8 mills + \$1.129 + \$62.62½ + 5 cents.
6. \$9 + 4 dollars 50 cents + \$16.16 + \$8.08 + 25 dollars + 25 cents.
7. 37½ cents + 12½ cents + 7 cents 8 mills + 2 dollars + 2 cents.
8. A man went to a grocery and purchased a barrel of flour for 6 dollars 25 cents, a barrel of potatoes for 3 dol-

lars 50 cents, a box of raisins for 2 dollars $12\frac{1}{2}$ cents, and a box of candles for 5 dollars 75 cents: what was the cost of all the articles?

9. A boy was sent to the grocery to purchase various articles. He purchased $\frac{1}{2}$ pound of tea for 37 cents, 1 pound of coffee for 35 cents, 7 pounds of sugar for $87\frac{1}{2}$ cents, 1 ham for 1 dollar $62\frac{1}{2}$ cents, and 1 pound of butter for 27 cents: what was the entire cost?

10. A person bought a hat for 3 dollars 75 cents, a coat for 9 dollars $87\frac{1}{2}$ cents, a pair of pantaloons for 4 dollars $37\frac{1}{2}$ cents, and a pair of boots for 4 dollars 18 cents: what did he pay for all?

11. A lady purchased, for a dress, 20 yards of silk for 18 dollars 18 cents, trimmings for 6 dollars 37 cents 5 mills, lining for 96 cents 6 mills, and paid 3 dollars 15 cents for making it: what did the dress cost?

12. A gentleman bought some cloth for a coat, for which he paid 16 dollars 25 cents, some lining for 3 dollars $12\frac{1}{2}$ cents, buttons for $62\frac{1}{2}$ cents, 1 dollar $12\frac{1}{2}$ cents for cutting, and 2 dollars $62\frac{1}{2}$ cents for making it: what did the coat cost?

13. A wood-dealer paid 362 dollars 88 cents for wood still lying in the forest; he paid 49 dollars 27 cents for freight, and 27 dollars for cartage: for what must he sell the wood, that he may gain 62 dollars $62\frac{1}{2}$ cents?

14. James, during the day, earned 87 cents, and found 4 dollars 25 cents: how much would he then have, supposing that he had in the morning 10 dollars 10 cents?

15. A boy wished to buy a set of school-books, which cost as follows: Arithmetic, 50 cents; Reader, $62\frac{1}{2}$ cents; Geography, $87\frac{1}{2}$ cents; Speller, 12 cents; Grammar, 65 cents; History, 49 cents, and Etymology, 37 cents: what must he pay for the set?

SUBTRACTION.

107. SUBTRACTION OF UNITED STATES CURRENCY is performed in the same manner as subtraction of Decimal Fractions.

1. From 169 dollars 27 cents and 6 mills, take 97 dollars 89 cents and 9 mills.

Rule.	OPERATION.
	\$ 1 6 9 . 2 7 6
<i>Write the numbers and make the subtraction as in Decimal Fractions.</i>	9 7 . 8 9 9
	\$ 7 1 . 3 7 7

Proof.—Same as in Decimals.

Examples.

1. From 212 dollars 16 cents 4 mills, take 97 dollars 29 cents 8 mills.

2. From 47 dollars 2 cents 3 mills, take 9 dollars 19 cents 6 mills.

3. Subtract 118 dollars 25 cents, from 250 dollars $12\frac{1}{2}$ cents.

4. Subtract 1 dollar 87 cents 5 mills, from 7 dollars 10 cents.

5. How much less is 5 dollars 75 cents, than 6 dollars 18 cents?

6. Take 6 dollars 37 cents 5 mills, from 10 dollars.

7. If a person having 12 dollars 62 cents, spends 7 dollars 81 cents, what will he have left?

8. If a gentleman buys a barrel of flour for 6 dollars 38 cents, and hands the seller a ten-dollar bill, how much should be returned to him?

9. If I buy cloth for 37 dollars 35 cents, and sell it for 51 dollars 5 mills, what do I gain?

10. A lad wishes to buy a sled, the price of which is 1 dollar 62 cents; he has only 95 cents: how much more does he need?

11. A barrel of flour costs 5 dollars 75 cents, and a barrel of potatoes 2 dollars 88 cents: what is the difference in the price of the two?

12. A person owing 15 dollars 27 cents, pays 9 dollars 75 cents: what does he still owe?

13. A mechanic, out of 25 dollars 25 cents due him, receives 18 dollars 48 cents: what is still due him?

14. A grocer bought coal to the amount of 28 dollars 50 cents, and paid for it with groceries to the amount of 19 dollars 38 cents, and the rest in cash: how much cash did he pay?

Examples in Addition and Subtraction.

1. A farmer bought sugar for \$2.62 $\frac{1}{2}$, tea for 1 dollar 50 cents, coffee for 75 cents, cheese for \$0.87 $\frac{1}{2}$, and molasses for 96 cents; he gave in payment a quantity of potatoes that were worth \$4.20, and paid the rest in cash: what amount of cash did he pay?

2. A country merchant starts for New York city with \$1000 to buy goods. When in the city, he bought dry goods to the amount of \$379.16, groceries to the amount of \$262.71, boots and shoes for \$160, and drugs for \$72.15; his expenses for board and travelling were \$26.75: what had he left on his arrival at home?

3. A merchant, during a certain day, received the following sums: \$47.61, \$115.23, \$416.37, \$12.72, and \$0.71: he paid out on the same day \$96.17, \$49.12, \$139.97, \$5.17, and \$95.95: how much did the receipts exceed the payments?

4. A pedler, at the beginning of the week, had goods to the value of \$25.50; he bought, during the week, goods to the value of \$21.16, and sold to the value of \$31.27; at the end of the week, his goods were worth \$30.60: what had he gained during the week?

5. A drover bought a horse for \$160: after keeping it for 6 months at an expense of \$70, he sold it for \$212.50: did he gain or lose, and how much?

6. A farmer sold a horse for 95 dollars 25 cents, and a cow for 47 dollars 36 cents, and received in payment a wagon worth \$165.75; the value of the wagon exceeded that of the horse and cow, and he gave another cow, which just paid the balance: what was the value of the second cow?

MULTIPLICATION.

108. MULTIPLICATION OF UNITED STATES CURRENCY is performed in the same manner as Multiplication of Decimal Fractions.

1. Multiply 125 dollars 7 dimes 6 cents and 5 mills, by 8.

Rule.—Express the sum of money in decimals of a dollar, and multiply as in multiplication of decimals.	OPERATION. \$ 1 2 5 . 7 6 5 8 ----- \$ 1 0 0 6 . 1 2 0
--	--

Proof.—Same as in decimals.

Examples.

1. Multiply 275 dollars 18 cents 3 mills, by 25.

2. Multiply \$116, 7 dimes 8 cents 9 mills, by 46.

3. Multiply 1693 dollars 3 cents and 7 mills, by 83.
4. Multiply 37 cents 8 mills, by $28\frac{1}{2}$.
5. Multiply 98 dollars and 9 mills, by $36\frac{1}{2}$.
6. If one barrel of flour costs 6 dollars 25 cents, what will be the cost of 12 barrels?
7. What must be paid for 23 days' work, at $\$1.62\frac{1}{2}$ per day?
8. What would be the cost of 18 yards of cloth, at $\$2.75$ per yard?
9. At $18\frac{3}{4}$ cents per yard, what would be the cost of $37\frac{1}{2}$ yards of French calico?
10. If board costs $\$4.625$ per week, how much must be paid for 13 weeks?
11. If the wages of one man be $\$12.12\frac{1}{2}$ for one week, what will be the wages of 26 men for 4 weeks?
12. If the transportation, by railroad, of one ton of merchandise costs $\$16$, what would be the cost of 21.75 tons?
13. The cost of constructing a railroad is $\$27695.60$ per mile: what is the cost of construction for $65\frac{3}{8}$ miles?
14. What is the product of $\$27.65$, by $37\frac{1}{2}$?
15. What will 126.5 yards of muslin cost, at the rate of $27\frac{1}{2}$ cents per yard?
16. How much money must a person have, to give $\$3.47$ to each of 27 poor families?
17. How much will a person save in 16 weeks, if he saves $\$2.37\frac{1}{2}$ per week?
18. A drover bought a drove of cattle, comprising 35 head, at $\$32.14$ per head: what did the drove cost?
19. A merchant sold 67 barrels of flour, at a price by which he lost $\$1.87\frac{1}{2}$ on each barrel: what was his entire loss?

Examples in the preceding Rules.

1. A merchant bought 96 barrels of flour at $\$5.25$ per barrel, and sold them all for $\$600$: what did he gain?
2. A lady bought $12\frac{1}{2}$ yards of muslin at 18 cents per yard, and 14 yards of calico at $12\frac{1}{2}$ cents per yard; she handed in payment a five-dollar bill: what change should be returned?
3. A gentleman agreed to buy 8 lots of ground at $\$674.375$ per lot, and to pay $\$3715.875$ in cash, and to give a bond and mortgage for the remainder: what was the amount of the bond?
4. A person owed $\$2716$ on his house; at one time he paid $\$475.62$; at another time, $\$675.625$; at another time, $\$276.375$; and subsequently he made 3 equal payments of $\$276.75$ each: how much is still due?
5. A merchant bought a ship for $\$37160.25$, and a steamer for $\$107645.50$; he gave, in payment, a block of 12 houses, each valued at $\$4750$; 37 lots of ground, valued at $\$425.25$ per lot, and the remainder in cash: how much cash was paid?
6. A merchant bought 346 yards of calico at 17 cents per yard, $85\frac{1}{2}$ yards of cloth at $\$1.16$ per yard, and 63 yards of silk at 73 cents per yard; for the goods he paid $\$125$ cash, and 25 yards of cloth worth $\$65.45$: what was still due?
7. A laborer worked on a farm 9 months, at $\$11.75$ per month; in payment he had received 6 bushels of potatoes at $37\frac{1}{2}$ cents per bushel, 2 barrels of flour at $\$6.12\frac{1}{2}$ per barrel, 125 pounds of Indian meal at $1\frac{1}{2}$ cents per pound, one hog, weighing 144 pounds, at $4\frac{5}{8}$ cents per pound, and the remainder in cash: what cash did he receive?
8. A farmer sold, for cash, 25 bushels of potatoes at $62\frac{1}{2}$ cents per bushel, 15 bushels of turnips at 18 cents per

bushel, and 50 heads of cabbage at 3 cents each: out of the proceeds, he bought 20 yards of muslin at 14 cents per yard, 36 yards of calico at 24 cents per yard, and 28 pounds of sugar at $8\frac{1}{2}$ cents per pound: what cash had he remaining?

Bills.

BROOKLYN, Feb. 12th, 1863.

9. *Mr. James Smith*

Bought of Samuel Wells:

- 25 pounds of sugar, at 9 cents per pound . . . \$
 - 3 pounds of tea, at 75 cents per pound . . .
 - 5 pounds of Java coffee, at 34 cents per pound . .
 - 3 gallons of molasses, at 63 cents per gallon . .
 - 7 pounds of cheese, at 12 cents per pound . . .
- \$ _____

Received Payment for Samuel Wells.

Charles Ferguson.

What was the amount of the above bill?

NEW YORK, Feb. 13th, 1863.

10. *Mr. Andrew Biere*

Bought of Thomas Shears:

- 15 yards of muslin, at 16 cents per yard . . . \$
 - 12 yards of calico, at 18 cents per yard . . .
 - 16 yards of silk, at $87\frac{1}{2}$ cents per yard . . .
 - 6 yards of white flannel, at 50 cents per yard . .
 - 18 yards of Canton flannel, at 27 cents per yard .
 - 4 spools of cotton thread, at 6 cents each . . .
 - 2 papers of pins, at 10 cents each . . .
- \$ _____

Received Payment.

CHICAGO, Feb. 19th, 1863.

11. *Mr. Seth Williams*

Bought of John Spencer:

- 5 boys' caps, at $\$1.87\frac{1}{2}$ each \$
 - 6 boys' suits, at $\$8.75$ each
 - 9 coats, at $\$3.65$ each
 - 10 pair of pantaloons, at $\$1.69$ a pair
 - 12 dozen of shirts, at $\$9.50$ per dozen
- \$ _____

Received Payment.

ALBANY, Feb. 17th, 1863.

12. *Mr. Sylvester Thomas*

Bought of James Spinner:

- 6 Practical Arithmetics, at 50 cents each . . . \$
 - 12 National Readers No. 4, at 56 cents each . . .
 - 9 Bullion's Grammars, at 48 cents each
 - 18 Intellectual Arithmetics, at 25 cents each . . .
 - 3 dozen Beer's Copy-books, at $\$1.08$ per dozen .
 - 1 Geometry, at $\$1.25$
- \$ _____

Received Payment.

BROOKLYN, Feb. 24th, 1863.

13. *Mr. John Thompson*

To Philip Shelf, Dr.

- For 2 pair of shoes, at $\$1.65$ per pair \$
 - " 3 pair of boots, at $\$3.62\frac{1}{2}$ per pair
 - " 3 pair of slippers, at $\$.95$ per pair
 - " 6 yards of superfine cloth, at $\$2.12\frac{1}{2}$ per yard
 - " 7 pair of India-rubber shoes, at $\$.96$ per pair
- \$ _____
- March 2d. *Credit by Cash* \$ 7.75

What is the balance due?

DIVISION.

109. DIVISION OF UNITED STATES CURRENCY is performed in the same manner as division of decimals.

1. Divide 296 dollars 27 cents by 26.

	OPERATION.
Rule.	26) 296.270 (11.395
	26
	36
	26

	102
	78

	247
	234

	130
	130

Proof.

Same as in decimals.

Examples.

1. Divide 472 dollars 16 cents 5 mills by 23.
2. Divide 1173 dollars 87 cents 7 mills by 37.
3. Divide 567 dollars 29 cents by 45.
4. Divide 2761 dollars 17 cents by 5 dollars 16 cents.
5. Divide 616 dollars 8 cents 5 mills by 4 dollars 17 cents 5 mills.
6. Divide 2030 dollars 6 mills by 156.
7. How many yards of cloth at \$1.75 per yard, can be bought for \$39.20?
8. If 8 yards of muslin cost \$2.16, what will 1 yard cost?
9. If a man for 15 days' work receives \$28.75, what was his daily wages?

10. How many barrels of flour, at 4 dollars 37½ cents per barrel, can be bought for 567 dollars 25 cents?

11. What would be the cost of one arithmetic, if \$162.96 were paid for 400 copies?

12. How many horses at \$82.50 each, can be bought for \$6187.50?

13. It is desired to raise by subscription, for a benevolent object, \$846: if each subscriber pays \$2.25, how many subscribers will be necessary to raise the amount?

14. A merchant finds that by selling calico at \$.18 per yard, he has received in one day cash to the amount of \$450.75: how many yards did he sell?

15. A father, at his death, left a fortune of \$25650 to be divided equally among his 5 children, after deducting one-third of it for his widow: what was the share of the widow, and what of each child?

Promiscuous Examples.

1. A farmer sold 16 bushels of potatoes at 62½ cents per bushel, and took his pay in sugar at 9½ cents per pound: how much sugar did he get?

2. A person bought 162 cords of oak wood, at \$3.25 per cord; he paid \$250 in cash, and the remainder in coal at \$4.60 per ton: how many tons of coal were given?

3. Two farmers agreed to exchange their farms: one farm comprised 175 acres, and was valued at \$85 per acre; and the other comprised 218 acres, valued at \$40 per acre: the difference of value was paid in cash: how much cash was paid?

4. A was in debt to B to the amount of \$916.75; in payment he gave one lot of ground, valued at \$345.60; cash, \$216.90; 15 boxes of oranges, at \$2.75 each; and 40 boxes of lemons, at \$2.16 each: what was still due?

5. A laborer was employed for 5 months, at \$27.50 per month; he received, each month, \$12.25 in cash and \$9.75 in groceries: at the end of the time, what had he saved?

6. A poor man bought a barrel of flour for \$6.50; 7 pounds of sugar, at 9 cents per pound; 28 pounds of Indian meal, at 3 cents per pound; 4 pounds of butter, at $23\frac{1}{2}$ cents per pound; and 15 pounds of ham, at 9 cents per pound; he paid \$5 in cash, and agreed to pay for the remainder in labor at \$1.25 per day: how many days must he labor?

7. If I pay \$96 for 25 hats, how much must I pay for 63 hats at the same rate?

8. If 36 men can be hired for \$50.40 for one day, how many men could be hired for the same time for \$133.00?

9. Find $\frac{7}{8}$ of 679 dollars 19 cents 6 mills.

10. A war-vessel captured a prize, which was afterwards sold for \$37650; $\frac{4}{5}$ of this sum was to be equally divided among 250 men: what was the share of each man?

11. How much is $\frac{1}{12}$ of \$56412.60?

12. In how many weeks could a father and son together earn \$65.75, if the father earns \$10.60 and the son \$3.75, per week?

13. A family, consisting of father, mother, and 4 children, desires to board in the country during the summer, and can afford to pay \$162: how many weeks can they remain, if the board of each parent is \$4.50, and of each child \$2.25?

14. A gentleman bought a farm of 160 acres, at \$75 per acre, and sold it for \$19000: what was the entire gain, and how much per acre?

15. If a merchant buys coal at the rate of \$3.75, and sells it at \$5 per ton, how many tons must he sell in order to gain \$1500?

DENOMINATE NUMBERS.

110. An **ABSTRACT NUMBER** is one whose unit is not named.

111. A **DENOMINATE NUMBER** is one whose unit is named, as 3 pounds, 4 horses, &c.

112. A **SIMPLE NUMBER** is a collection of units of the same kind, whether abstract or denominate.

113. A **COMPOUND DENOMINATE NUMBER** is one expressed by two or more denominations.

114. A **SCALE** is a series of numbers expressing the law of relation between the different units of any number.

Kinds of Units.

There are eight different Units of Arithmetic:

- I. UNITS OF ABSTRACT NUMBER;
- II. UNITS OF CURRENCY;
- III. UNITS OF LENGTH;
- IV. UNITS OF SURFACE;
- V. UNITS OF VOLUME, OR CAPACITY;
- VI. UNITS OF WEIGHT;
- VII. UNITS OF TIME;
- VIII. UNITS OF CIRCULAR MEASURE.

I. ABSTRACT NUMBERS.

Table.

10 Units	make	1 Ten.
10 Tens		1 Hundred.
10 Hundred		1 Thousand.
10 Thousand		1 Ten-thousand.
&c.			&c.