384. The two numbers of a ratio are called *terms*. The first is the *numerator* or *antecedent*; the second is the *denominator* or *consequent*.

385. Ratios are common fractions: all the rules and principles relative to common fractions may be applied to ratios.

The ratio of 9 to 17 may be written $\frac{9}{17}$, or 9:17. We shall employ the latter form.

386. An equality of ratios is a proportion.

Thus, $\frac{1}{2} = \frac{1}{15}$ is a proportion; it may be read: 1 is to 3 as 5 is to 15, and be written: 1 : 3 :: 5 : 15. The terms 1 and 15 are called *extremes*; 3 and 5, means.

387. You see that the product of the extremes is equal to the product of the means (fundamental principle).

To find an omitted term of a proportion.

NOTE.—The missing term is replaced by x.

 E_{XAMPLE} . - 36 : 6 :: 24 : x.

OPERATION.	EXPLANATION.—Since the product of
$36 \times x = 24 \times 6$ $x = \frac{24 \times 6}{24 \times 6}$	the extremes is equal to the product of the means, 36 times x equals 24 times 6. One time x equals 36 times less than
x=4.	24×6 , or 24×6 . Solving, $x = 4$.

388. Rule.—. the product of the means by the given extreme; or divide the product of the extremes by the given mean.

Written Exercises.

Find the value of x in the following proportions:

1.	4:26::10:x.	11. 40 : 5 :: x : 9.
2.	36:18::12:x.	12. 16 : 32 :: x : 4.
3.	48:20:120:x.	13. $6:15::x:75$.
4.	x: 16:: 18: 9.	14. 18 : 4 :: 24 : x .
5.	x:30:::8:48.	15. 16 : 28 :: 4 : x .
6.	x: 18:: 30: 20.	16. $\frac{3}{2}$: 5 :: x : 40.
7.	100: x :: 50: 75.	17. $6:15::33:x$.
8.	65: x:: 45: 9.	18. $6:10::x:\frac{1}{2}$
9.	30: x :: 10: 9.	19. $\frac{5}{2}$: x :: 25 : 8.
0.	18:9::x:27.	20. $\frac{3}{4}$: $\frac{2}{3}$:: 9 : x.