

Note. We assume that a, b, c represent such numbers that in CASE II. a is not less than the sum of b and c , in CASE III. b is not less than c , and in CASE IV. b is not less than c , and a is not less than b .

19. Collecting the results obtained in Art. 18, we have

$$a + (b + c) = a + b + c,$$

$$a - (b + c) = a - b - c,$$

$$a + (b - c) = a + b - c,$$

$$a - (b - c) = a - b + c.$$

From which we obtain the following rules for the removal of a bracket.

Rule I. When a bracket is preceded by the sign +, remove the bracket and leave the signs of the terms in it *unchanged*.

Rule II. When a bracket is preceded by the sign -, remove the bracket and *change the sign of each term in it*.

These rules apply to cases in which any number of terms are included in the bracket.

Thus

$$a + b + (c - d + e - f) = a + b + c - d + e - f,$$

and

$$a + b - (c - d + e - f) = a + b - c + d - e + f.$$

20. The rules given in the preceding Article for the removal of brackets furnish corresponding rules for the introduction of brackets.

Thus if we enclose two or more terms of an expression in a bracket,

I. The sign of each term remains the same if + precedes the bracket

II. The sign of each term is changed if - precedes the bracket.

Ex. $a - b + c - d + e - f = a - b + (c - d) + (e - f),$
 $a - b + c - d + e - f = a - (b - c) - (d - e + f).$