

29. We have placed the expressions in the examples given in the preceding Article under each other, as in Arithmetic, for the sake of clearness, but the same operations might be exhibited by means of signs and brackets, thus Examples (2) of each rule might have been worked thus, in Addition,

$$\begin{aligned} & 5a + 7b - 3c - 4d + (6a - 7b + 9c + 4d) \\ &= 5a + 7b - 3c - 4d + 6a - 7b + 9c + 4d \\ &= 11a + 6c; \end{aligned}$$

and, in Subtraction,

$$\begin{aligned} & 3a + 7b - 8c - (3a - 7b + 4c) \\ &= 3a + 7b - 8c - 3a + 7b - 4c \\ &= 14b - 12c. \end{aligned}$$

EXAMPLES.—I.

Simplify the following expressions, by combining like symbols in each.

1. $3a + 4b + 5c + 2a + 3b + 7c.$
2. $4a + 5b + 6c - 3a - 2b - 4c.$
3. $6a - 3b - 4c - 4a + 5b + 6c.$
4. $8a - 5b + 3c - 7a - 2b + 6c - 3a + 9b - 7c + 10a.$
5. $5x - 3a + b + 7 + 2b - 3x - 4a - 9.$
6. $a - b - c + b + c - d + d - a.$
7. $5a + 10b - 3c + 2b - 3a + 2c - 2a + 4c.$

EXAMPLES.—II. ADDITION.

Add together

1. $a + x$ and $a - x.$
2. $a + 2x$ and $a + 3x.$
3. $a - 2x$ and $2a - x.$
4. $3x + 7y$ and $5x - 2y.$
5. $a + 3b + 5c$ and $3a - 2b - 3c.$
6. $a - 2b + 3c$ and $a + 2b - 3c.$
7. $1 + x - y$ and $3 - x + y.$
8. $2x - 3y + 4z, 5x - 7y - 2z,$ and $6x + 9y - 8z.$
9. $2a + b - 3x, 3a - 2b + x, a + b - 5x,$ and $4a - 7b + 6x.$

EXAMPLES.—III. SUBTRACTION.

1. From $a + b$ take $a - b.$
2. $3x + y$ $2x - y.$
3. $2a + 3c + 4d$ $a - 2c + 3d.$
4. $x + y + z$ $x - y - z.$