EXERCISE VIII.

1. Add $4x+7y+13z$ five times in succession to $x-41y-72z$.

2. To the sum of $3a-4b-17c$ and $4c-5b-a$ add the sum of $a-5b-19c$ and $a+c+15b$.

3. From $3x^3-2x^2-5x+7$ take the sum of $8x^3-5x^2+7x-2$ and $8x^2-9x-19$.

4. Subtract $5+a-9a^2+7a^3$ from the sum of $8-2a-13a^2$ and $6a-19a^2-27a^3$.

5. Find the sum of $19a-27b-36c$ and $-28a+27b-39c$, and subtract the result from $2a-3b-5c$.

6. Take x^2-3y^2 from $5xy+7y^2$, and add the remainder to the sum of $5x^2-9xy+3y^2$ and $-8xy-11y^2$.

7. Add together $5x^3+7x^2y-9xy^2+18y^3$ and $-2x^3-5xy^2-7x^2y-y^3$, and diminish the result by $-x^3-x^2y-xy^2-y^3$.

8. Take $14a^2-14a+3$ from unity, and add $5+13a-9a^2$ to the difference.

9. What expression must be subtracted from $19x^2-3x+4y-7$ to leave x^2-y-9?

10. What expression must be added to $5ab-11ac+12bc$ to produce $ab+5bc-6ac$?

11. To what expression must $8x^2-9x+5$ be added to produce zero?

12. Subtract $5x^3+4x^2-5x-9$ five times in succession from $x^3+13x-18$.

13. From $5x^2+6xy-5y^2-12xz-3yz-8z^2$ take $2x^2-3y^2+4xz-5z^2+6yz-7xy$.

14. From $a^5-4a^3b^2-8a^2b^3-17ab^4-12b^5$ take in succession $a^5-2a^4b-3a^3b^2$; $2a^4b-4a^3b^2-6a^2b^3$; $3a^3b^2-6a^2b^3-9ab^4$; and $4a^2b^3-8ab^4-12b^5$.

15. By how much does $2x-3$ exceed $5x-17$?

16. Subtract the sum of $15l-9m+3n-p$ and $4m-5n+p+l$ from $13l-11m-9n$.