EXERCISE XVIII.

APPLICATION OF $x^3 \pm y^3$.

(1.) $(a+b)(a^2-ab+b^2)$; $(a+x+y)(a^2+2ax+x^2-ay-xy+y^2)$; $(m+n+p+q)(m+n)^2-(m+n)(p+q)+(p+q)^2$.

(2.) $2(m^2+n^2)(m^4+5m^2n^2+n^4)$; $(a^2+b^2)(a^4-a^2b^2+b^4)$.

(3.) $(a^4+b^4)(a^8-a^4b^4+b^8)$; $(a^5+b^5)(a^{10}-a^5b^5+b^{10})$; $(2a+3b)(4a^2-6ab+9b^2)$.

(4.) $(x^6+y^3)(x^{12}-x^6y^3+y^6)$; $(5x^7+8y^8)(25x^{14}-40x^7y^8+64q^{16})$; $\{(a-b-c)\}\{a^2+ab+ac+b^2+2bc+c^2\}$.

(5.) $(2x-4y)(4x^2+8xy+16y^2)$; $(a^8-b^{11})(a^{16}+a^8b^{11}+b^{22})$; $(x-a+b)(x^2-2ax+a^2-bx+ab+b^2)$.

(6.) (7.) (9.) (10.) Use $\frac{x^3 \pm y^3}{x \pm y}$, etc.

Page 16. (8.) $(x+a)^2-b(x+a)+b^2$.

EXERCISE XIX.

GENERAL EXERCISE IN FACTORING.

A.

(1.) $(x+y)(ax+ay-bc)$; $(5p+24)(3p-1)$.

(2.) $2a(2b-2c)$; $(a-b-c-2)(a+b+c)$.

(3.) $(2x+3y+z)(x+4y+3z)$; $(x^7+4y^7)(x^7-y^7)$.

(4.) $(b-c)(x+a)^2$; $(2a+2b+1)(a+b+2)$.

(5.) $(x+y)(x-y)(x^2+xy+y^2)$; $(a-1-b)(a^2-2a+1+ab-b+b^2)$.

(6.) $(a^2+b^2)(c^2+d^2)$; $(x^2+5x+4)(x^2+5x+6)$.

(7.) $(x+y)(x^2+xy+y^2)(x^2-xy+y^2)$; $(x^2+1)(x^2+x-1)$.

(8.) $(a-1)(a^2-a+1)$;
write expression x^3+1+4x^2+5x+1 factor by parts;
$(x+1)(x^2+3x+2)$; $(x+1)(x+1)(x+3)$.

(9.) $(x+1)(x+2)(x+3)$; $(x-1)(x-2)(x-4)$:
$(x-2)(x-3)(x-4)$.

(10.) $(x+1)(x-2)(x+3)$; $(x-2)(x-4)(x+5)$.
$(x-1)(x+2)(x-3)$.