

Factoring, Distributive Property

Algorithm

1. Find GCF of polynomial
2. Divide each term of the polynomial by GCF
3. Rewrite the polynomial as a product of the GCF and the quotient

Example: Factor completely: $4x^3 + 8x^2 - 12x$

1. GCF is $4x$
2. $\frac{4x^3}{4x} + \frac{8x^2}{4x} - \frac{12x}{4x} = x^2 + 2x - 3$
3. $4x(x^2 + 2x - 3)$

Factor the following polynomials

1. $3x + 3y$
2. $4h - 8k$
3. $5x - 15y$
4. $xy + xz$
5. $8x - 12y$
6. $25 - 50x$
7. $P + Prt$
8. $3x^3 + 6x^4$
9. $4a^2bc + 8abc^2$
10. $x^4 + x^2 + x$
11. $2x^2 + 6x - 8$
12. $3x^3 - 15x^2 - 12x$
13. $-m^2n - mn^2 - 3m^2n^2$