Factoring guide

Three terms

(1) Factor out common factors.
(2) Check for special forms:
  (a) square of a sum.
  (b) square of a difference.
(3) Try trial and error:
  (a) easy if leading coefficient is 1.
  (b) still might be easy if leading coefficient is prime.
(4) If all else fails, use the scheme on textbook pages 115-119.
(5) Check your factorization.

Two terms

(1) Factor out common factors.
(2) Check for difference of squares.
(3) Check your factorization.

Four terms

(1) Factor out common factors.
(2) Factor by grouping.
(3) Check your factorization.

Special forms

(1) The square of a sum: $a^2+2ab+b^2=(a+b)^2$.
(2) The square of a difference: $a^2-2ab+b^2=(a-b)^2$.
(3) The difference of squares: $a^2-b^2=(a+b)(a-b)$.

Worth remembering

(1) The sum of squares a^2+b^2 does not factor in the real numbers.