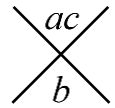


Factoring Trinomials – Intermediate

Goal: Factor trinomials of the form $ax^2 + bx + c$ where a, b, c are the coefficients.

a is called the “Leading Coefficient” (from highest degree term).



Objective 1: Factor Trinomials using AC Method when Leading Coefficient = 1

Ex) $x^2 + 5x + 6$

Ex) $x^2 - 9x + 18$

Ex) $x^2 + 5x - 36$

Pause the video to try this one on your own, then restart the video when you are ready to check your answer.

Ex) $x^2 - 6x - 16$

Exercises

Factor each trinomial using the AC Method.

1. $x^2 - 7x - 60$

2. $x^2 - 15x + 26$

Objective 2: Factor Trinomials using AC Method when Leading Coefficient $\neq 1$

Ex) $4x^2 - 21x - 18$

Ex) $12x^2 - 28x + 15$

Ex) $6x^2 + 5x - 21$

Pause the video to try this one on your own, then restart the video when you are ready to check your answer.

Ex) $12x^2 - 43x + 10$

Exercises

Factor each trinomial using the AC Method.

1. $10x^2 - 3x - 4$

2. $8x^2 + 51x + 18$

Objective 3: Factor Trinomials using Trial and Error

Ex) $6x^2 + 35x + 36$

Ex) $5x^2 - 21x + 4$

Ex) $20x^2 - 56x + 15$

Pause the video to try this one on your own, then restart the video when you are ready to check your answer.

Ex) $12x^2 - 16x - 3$

Exercises

Factor each trinomial using Trial and Error.

1. $6x^2 - x - 40$

2. $12x^2 - 32x + 21$

Objective 4: Factor Trinomials that have a Greatest Common Factor (GCF).

Ex) $32x^3 + 8x^2 - 60x$

Ex) $20x^4 - 67x^3 + 21x^2$

Pause the video to try this one on your own, then restart the video when you are ready to check your answer.

Ex) $36x^2y - 21xy - 30y$

Exercises

Factor each trinomial completely.

1. $8x^5 + 10x^4 - 7x^3$

2. $54x^3y - 78x^2y - 20xy$