

Name : _____

Factoring by Trial and Error Method

Factor each trinomial using the trial and error method.

Solved Example: $6x^2 - 25x + 24$

- Paired factors of $6x^2$ are $x(6x)$ or $2x(3x)$
- Thus, the factors can be $(x - \underline{\quad})(6x - \underline{\quad})$ or $(2x - \underline{\quad})(3x - \underline{\quad})$
- Try all paired factors of 24
Paired factors are (1 and 24, 2 and 12, 3 and 8, 4 and 6)
- So, the correct factors are $(2x - 3)(3x - 8)$

$$4x^2 - 5x - 6$$

$$5x^2 + 8x - 4$$

$$5x^2 - 22x - 15$$

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

$$2x^2 + 3x - 2$$

$$x^2 - 8x + 16$$

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Answers

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$$4x^2 - 5x - 6$$

$$(4x + 3)(x - 2)$$

$$5x^2 + 8x - 4$$

$$(5x - 2)(x + 2)$$

$$5x^2 - 22x - 15$$

$$(5x + 3)(x - 5)$$

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

$$(x - 3)(x - 6)$$

$$2x^2 + 3x - 2$$

$$(2x - 1)(x + 2)$$

$$x^2 - 8x + 16$$

$$(x - 4)^2$$