

Name : \_\_\_\_\_

Score : \_\_\_\_\_ Date : \_\_\_\_\_

# Factoring Trinomials Using the Box Method

Factor the following trinomials using the box method.  
Specify the product and sum that were used to factor the expression.

## Solved

$$6x^2 - 17x + 5$$

$$2x \quad -5$$

3x	$6x^2$	$-15x$	Product: $30x^2$
-1	$-2x$	5	Sum: $-17x$

Factors:  $(2x - 5)(3x - 1)$

1)  $4x^2 + 5x - 6$

		Product: _____
		Sum: _____

Factors: \_\_\_\_\_

2)  $3x^2 + 16x + 5$

		Product: _____
		Sum: _____

Factors: \_\_\_\_\_

3)  $x^2 + 2x - 48$

		Product: _____
		Sum: _____

Factors: \_\_\_\_\_

4)  $x^2 + 2x - 24$

		Product: _____
		Sum: _____

Factors: \_\_\_\_\_

5)  $2x^2 + 9x + 10$

		Product: _____
		Sum: _____

Factors: \_\_\_\_\_

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# Factoring Trinomials Using the Box Method

## Answers

### Solved

$$6x^2 - 17x + 5$$

$$2x \quad -5$$

3x	$6x^2$	$-15x$	Product: $30x^2$
-1	$-2x$	5	Sum: $-17x$

Factors:  $(2x - 5)(3x - 1)$

$$1) \quad 4x^2 + 5x - 6$$

$$4x \quad -3$$

x	$4x^2$	$-3x$	Product: $-24x^2$
2	$8x$	$-6$	Sum: $5x$

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

$$2) \quad 3x^2 + 16x + 5$$

$$3x \quad 1$$

x	$3x^2$	$1x$	Product: $15x^2$
5	$15x$	5	Sum: $16x$

Factors:  $(3x + 1)(x + 5)$

$$3) \quad x^2 + 2x - 48$$

$$x \quad -6$$

x	$x^2$	$-6x$	Product: $-48x^2$
8	$8x$	$-48$	Sum: $2x$

Factors:  $(x - 6)(x + 8)$

$$4) \quad x^2 + 2x - 24$$

$$x \quad -4$$

x	$x^2$	$-4x$	Product: $-24x^2$
6	$6x$	$-24$	Sum: $2x$

Factors:  $(x - 4)(x + 6)$

$$5) \quad 2x^2 + 9x + 10$$

$$x \quad 2$$

2x	$2x^2$	$4x$	Product: $20x^2$
5	$5x$	10	Sum: $9x$

Factors:  $(x + 2)(2x + 5)$