

# Factoring Quadratic Expressions (I)

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

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

Factor each expression.

1.  $-4x^2 + 81$

11.  $4x^2 + 4x - 63$

2.  $4x^2 + 15x - 4$

12.  $-4x^2 - 41x - 72$

3.  $-2x^2 - x + 6$

13.  $-3x^2 + x + 4$

4.  $3x^2 - 8x + 4$

14.  $-3x^2 - 22x - 35$

5.  $-3x^2 + 28x - 49$

15.  $-x^2 + 12x - 36$

6.  $4x^2 - 19x - 63$

16.  $-4x^2 - 16x - 15$

7.  $-4x^2 + 9x + 28$

17.  $3x^2 - 19x - 14$

8.  $-4x^2 - 11x + 45$

18.  $2x^2 + 11x - 21$

9.  $-3x^2 - 20x + 32$

19.  $4x^2 + 5x + 1$

10.  $3x^2 + 13x + 12$

20.  $2x^2 - x - 45$

# Factoring Quadratic Expressions (I) Answers

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

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

Factor each expression.

1.  $-4x^2 + 81$

$$-(2x - 9)(2x + 9)$$

2.  $4x^2 + 15x - 4$

$$(4x - 1)(x + 4)$$

3.  $-2x^2 - x + 6$

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

4.  $3x^2 - 8x + 4$

$$(3x - 2)(x - 2)$$

5.  $-3x^2 + 28x - 49$

$$-(3x - 7)(x - 7)$$

6.  $4x^2 - 19x - 63$

$$(x - 7)(4x + 9)$$

7.  $-4x^2 + 9x + 28$

$$-(x - 4)(4x + 7)$$

8.  $-4x^2 - 11x + 45$

$$-(4x - 9)(x + 5)$$

9.  $-3x^2 - 20x + 32$

$$-(x + 8)(3x - 4)$$

10.  $3x^2 + 13x + 12$

$$(x + 3)(3x + 4)$$

11.  $4x^2 + 4x - 63$

$$(2x - 7)(2x + 9)$$

12.  $-4x^2 - 41x - 72$

$$-(x + 8)(4x + 9)$$

13.  $-3x^2 + x + 4$

$$-(x + 1)(3x - 4)$$

14.  $-3x^2 - 22x - 35$

$$-(3x + 7)(x + 5)$$

15.  $-x^2 + 12x - 36$

$$-(x - 6)(x - 6) = -(x - 6)^2$$

16.  $-4x^2 - 16x - 15$

$$-(2x + 3)(2x + 5)$$

17.  $3x^2 - 19x - 14$

$$(3x + 2)(x - 7)$$

18.  $2x^2 + 11x - 21$

$$(x + 7)(2x - 3)$$

19.  $4x^2 + 5x + 1$

$$(4x + 1)(x + 1)$$

20.  $2x^2 - x - 45$

$$(x - 5)(2x + 9)$$