

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

Key

Period: \_\_\_\_\_

## 8.4 Worksheet

Factor each trinomial.

1.  $12x^2 + 46x + 14$

$$2(3x+1)(2x+7)$$
$$(6x+2)(2x+7)$$
$$(3x+1)(4x+14)$$

5.  $18x^2 + 42x + 12$

$$6(3x+1)(x+2)$$
$$(18x+6)(x+2)$$
$$(3x+1)(6x+12)$$

2.  $12x^2 - 26x + 4$

$$2(6x-1)(x-2)$$
$$(12x-2)(x-2)$$
$$(6x-1)(2x-4)$$

6.  $12x^2 - 26x + 12$

$$2(3x-2)(2x-3)$$
$$(6x-4)(2x-3)$$
$$(3x-2)(4x-6)$$

3.  $12n^2 + 16n + 4$

$$4(n+1)(3n+1)$$
$$(4n+4)(3n+1)$$
$$(n+1)(12n+4)$$

7.  $16a^2 + 32a - 20$

$$4(2a-1)(2a+5)$$
$$(8a-4)(2a+5)$$
$$(2a-1)(8a+20)$$

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

$$(2x-1)(2x+5)$$

8.  $9x^2 + 33x + 18$

$$3(x+3)(3x+2)$$
$$(3x+9)(3x+2)$$
$$(x+3)(9x+6)$$

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9.  $12n^2 + 48n - 27$

$$\begin{aligned} &3(2n-1)(2n+9) \\ &(6n-3)(2n+9) \\ &(2n-1)(6n+27) \end{aligned}$$

13.  $24u^2 - 52u + 8$

$$\begin{aligned} &4(u+2)(6u+1) \\ &(4u+8)(6u+1) \\ &(u+2)(24u+4) \end{aligned}$$

10.  $5x^2 - 7x - 6$

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

14.  $100d^2 + 170d + 70$

$$\begin{aligned} &10(d+1)(10d+7) \\ &(10d+10)(10d+7) \\ &(d+1)(100d+70) \end{aligned}$$

11.  $6x^2 - 5x - 4$

$$(2x+1)(3x-4)$$

15.  $6x^2 + 27x + 30$

$$\begin{aligned} &3(2x+5)(x+2) \\ &(6x+15)(x+2) \\ &(2x+5)(3x+6) \end{aligned}$$

12.  $18a^2 + 18a + 4$

$$\begin{aligned} &2(3a+1)(3a+2) \\ &(6a+2)(3a+2) \\ &(3a+1)(6a+4) \end{aligned}$$

16.  $3x^2 + 14x + 16$

$$(3x+8)(x+2)$$