

## Factoring (Leading Coefficient Greater than 1)

Date \_\_\_\_\_ Period \_\_\_\_\_

**Factor each completely by splitting the linear term (Use the AC method).**

1)  $5x^2 + 41x - 36$

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

2)  $3r^2 + 25r - 18$

$(3r - 2)(r + 9)$

3)  $5r^2 - 38r - 16$

$(5r + 2)(r - 8)$

4)  $2b^2 + 15b - 8$

$(2b - 1)(b + 8)$

5)  $5x^2 - 9x - 2$

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

6)  $4m^2 - 38m + 48$

$2(2m - 3)(m - 8)$

7)  $6p^2 + 15p - 9$

$3(2p - 1)(p + 3)$

8)  $5a^2 - 13a + 8$

$(5a - 8)(a - 1)$

9)  $14a^2 - 66a + 40$

$2(7a - 5)(a - 4)$

10)  $9v^2 - 12v + 3$

$3(3v - 1)(v - 1)$

11)  $3n^2 + 19n - 40$

$(3n - 5)(n + 8)$

12)  $2x^2 + 27x + 70$

$(2x + 7)(x + 10)$

13)  $3n^2 - 31n + 70$

$(3n - 10)(n - 7)$

14)  $-2r^2 + 19r - 24$

$-(2r - 3)(r - 8)$

15)  $7x^2 + 2x - 9$

$(7x + 9)(x - 1)$

16)  $8x^2 - 6x - 27$

$(2x + 3)(4x - 9)$

17)  $-6p^2 + 11p - 4$

$-(2p - 1)(3p - 4)$

18)  $48b^2 - 114b + 36$

$6(b - 2)(8b - 3)$

19)  $27n^2 - 69n - 36$

$3(n - 3)(9n + 4)$

20)  $-10x^2 - 29x + 21$

$-(5x - 3)(2x + 7)$

21)  $24r^2 + 78r - 135$

$3(4r - 5)(2r + 9)$

22)  $45a^2 + 210a + 200$

$5(3a + 4)(3a + 10)$

23)  $9n^2 + 33n + 10$

$(3n + 1)(3n + 10)$

24)  $36v^2 + 244v + 168$

$4(v + 6)(9v + 7)$

25)  $9a^2 - 19a - 24$

$(a - 3)(9a + 8)$