

Factoring Trinomials ( $a > 1$ )

Factor each completely.

1)  $3p^2 - 2p - 5$

$$(3p - 5)(p + 1)$$

|    |    |   |          |
|----|----|---|----------|
| +  | +  | 5 | 15p - p  |
| +  | -  | 5 | -15p + 1 |
| -5 | 1  |   | 3p - 5p  |
| 5  | -1 |   |          |

2)  $2n^2 + 3n - 9$

$$(2n - 3)(n + 3)$$

|    |    |         |
|----|----|---------|
| -3 | 3  | 6n - 3n |
| 3  | -3 |         |
| -1 | 9  |         |
| 9  | -1 |         |
| -9 | 1  |         |
| 1  | -9 |         |

3)  $3n^2 - 8n + 4$

$$(3n - 2)(n - 2)$$

|    |    |          |
|----|----|----------|
| -2 | -2 | -6n - 2n |
| -4 | -1 |          |
| -1 | -4 |          |

4)  $5n^2 + 19n + 12$

$$(5n + 4)(n + 3)$$

|    |    |                |
|----|----|----------------|
| 4  | 3  | 10n + 6n = 16n |
| 3  | 4  | 30n + 2n = 32n |
| 12 | 1  | 15n + 4n = 19n |
| 1  | 12 |                |

5)  $2v^2 + 11v + 5$

6)  $2n^2 + 5n + 2$

7)  $7a^2 + 53a + 28$

8)  $9k^2 + 66k + 21$