

Extra Practice

Lesson 9-3

(pages 489–494)

Factor each trinomial.

- $x^2 - 9x + 14$ $(x - 7)(x - 2)$
- $a^2 - 9a - 36$ $(a - 12)(a + 3)$
- $x^2 + 2x - 15$ $(x + 5)(x - 3)$
- $n^2 - 8n + 15$ $(n - 5)(n - 3)$
- $b^2 + 22b + 21$ $(b + 21)(b + 1)$
- $c^2 + 2c - 3$ $(c + 3)(c - 1)$
- $x^2 - 5x - 24$ $(x - 8)(x + 3)$
- $n^2 - 8n + 7$ $(n - 7)(n - 1)$
- $m^2 - 10m - 39$ $(m - 13)(m + 3)$
- $z^2 + 15z + 36$ $(z + 12)(z + 3)$
- $s^2 - 13st - 30t^2$ $(s - 15t)(s + 2t)$
- $y^2 + 2y - 35$ $(y + 7)(y - 5)$
- $r^2 + 3r - 40$ $(r + 8)(r - 5)$
- $x^2 + 5x - 6$ $(x + 6)(x - 1)$
- $x^2 - 4xy - 5y^2$ $(x - 5y)(x + y)$
- $r^2 + 16r + 63$ $(r + 9)(r + 7)$
- $v^2 + 24v - 52$ $(v + 26)(v - 2)$
- $k^2 - 27kj - 90j^2$ $(k - 30j)(k + 3j)$

Solve each equation. Check your solutions.

- $a^2 + 3a - 4 = 0$ $\{-4, 1\}$
- $x^2 - 8x - 20 = 0$ $\{-2, 10\}$
- $b^2 + 11b + 24 = 0$ $\{-8, -3\}$
- $y^2 + y - 42 = 0$ $\{-7, 6\}$
- $k^2 + 2k - 24 = 0$ $\{-6, 4\}$
- $r^2 - 13r - 48 = 0$ $\{-3, 16\}$
- $n^2 - 9n = -18$ $\{3, 6\}$
- $2z + z^2 = 35$ $\{-7, 5\}$
- $-20x + 19 = -x^2$ $\{1, 19\}$
- $10 + a^2 = -7a$ $\{-5, -2\}$
- $z^2 - 57 = 16z$ $\{-3, 19\}$
- $x^2 = -14x - 33$ $\{-11, -3\}$
- $22x - x^2 = 96$ $\{6, 16\}$
- $-144 = q^2 - 26q$ $\{8, 18\}$
- $x^2 + 84 = 20x$ $\{6, 14\}$