1.3 Factoring Quadratics Day 1

Factor each completely. Reminder: check for a GCF when a ≠ 1.

$x^2 + x - 90$

M#: $\frac{-90}{10 \cdot -9}$

$x^2 + 10x - 9x - 90$

$x(x+10) - 9(x+10)$

$\boxed{(x+10)(x-9)}$

$k^2 - 7k + 12$

$\frac{12}{-3 \cdot -4}$

$k^2 - 3k - 4k + 12$

$k(k-3) - 4(k-3)$

$\boxed{(k-3)(k-4)}$

$x^2 - 4x - 45$

$\frac{-45}{-9 \cdot 5}$

$x^2 - 9x + 5x - 45$

$x(x-9)\ 5(x-9)$

$\boxed{(x-9)(x+5)}$

$5n^2 + 30n + 40$

$\frac{200}{10\ \ 20}$ $\frac{8}{2\ 4}$

$5n^2 + 10n + 20n + 40$

$5n(n+2)\ 20(n+2)$

$(5n+20)(n+2)$

$\boxed{5(n+4)(n+2)}$

$5(n^2+6n+8)$

$n^2+2n+4n+8$

$n(n+2)\ 4(n+2)$

$\boxed{5(n+2)(n+4)}$

$-2x^2 - 6x - 4$

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

$\frac{2}{1\ 2}$

$x^2+1x+2x+2$

$x(x+1)\ 2(x+1)$

$\boxed{-2(x+1)(x+2)}$

$9p^2 - 39p + 30$

$3(3p^2 - 13p + 10)$

$\frac{30}{-10 \cdot -3}$

$3p^2 - 10p - 3p + 10$

$p(3p-10) - 1(3p-10)$

$\boxed{3(3p-10)(p-1)}$