

Day 8 Hw: Factoring Quadratics

Factor each of the following polynomials.

1.) $x^2 - 13x + 12$ $\frac{+13}{-12-1}$ $\frac{*12}{-12-1}$ ✓
 $(x-12)(x-1)$

3.) $10x^2 + x - 3$

$\frac{+1}{-5}$ $\frac{-30}{-5}$ ✓

~~XXXXXXXXXX~~

$10x^2 + 6x - 5x - 3$
 $2x(5x+3) - 1(5x+3)$

$(2x-1)(5x+3)$

4.) $11x^2 + 17x - 10$

$\frac{+17}{-5}$ $\frac{*10}{-5}$ ✓
 $22-5$ -5 22

$11x^2 + 22x - 5x - 10$

$11x(x+2) - 5(x+2)$

$(11x-5)(x+2)$

2.) $x^2 + 5x - 6$

$\frac{+5}{32}$ $\frac{*6}{61}$

$(x+6)(x-1)$

5.) $x^2 + 14x + 45$

$\frac{+14}{5+9}$ $\frac{*45}{5 \cdot 9}$ ✓

$(x+5)(x+9)$

6.) $6x^2 - 47x - 8$

$6x^2 + 1x - 48x - 8$
 $x(6x+1) - 8(6x+1)$

$(6x+1)(x-8)$

$\frac{6 \times 8}{=}$
 $\frac{+(-)48}{48-1}$
 $\frac{-47}{-48+1}$

7.) $x^2 + 13x + 22$

$\frac{+13}{11+2}$ $\frac{*22}{11 \times 2}$ ✓

$(x+11)(x+2)$

8.) $-x^2 + 9x + 52$

$-x^2 + 4x + 13x + 52$

$\frac{+9}{13-4}$ $\frac{-52}{26-2}$
 $13-4$ ✓ $26-2$
 $13-4$ ✓

~~XXXXXXXXXX~~

$-x(x+4) + 13(x+4)$

$(-x+13)(x+4)$