Factor

$3a(b-2)+1(b-2)$

$(b-2)(3a+1)$

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

12

$3 \cdot 4$

$(x+2)[(x-3)+(x-5)]$

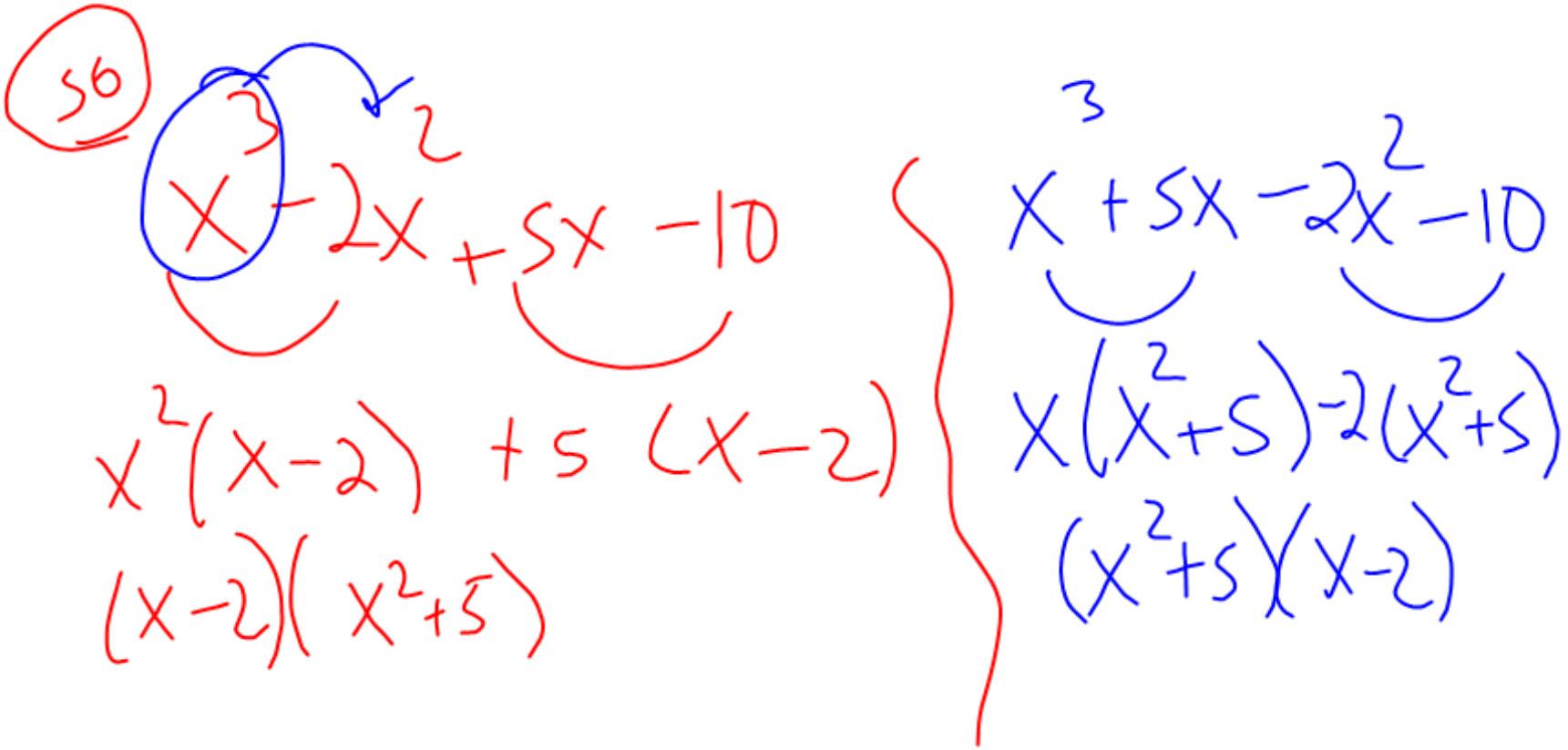
$(x+2)(2x-8) \rightarrow 2(x-4)(x+2)$

Factor

1. look for a GCF
2. Count the #. terms
   - 2-terms <
   - 3-terms <
   - 4-terms < factor by grouping (pairs)

50. $x^3 - 2x^2 + 5x - 10$

51. $xy - 6x + 2y - 12$



51. $xy - 6x + 2y - 12$

$x(y-6) + 2(y-6)$

$(y-6)(x+2)$

58. $3x^3 - 2x^2 - 6x + 4$

59. $x^2 - ax - bx + ab$

60. $x^2 + ax - bx - ab$

61. $x^3 - 12 - 3x^2 + 4x$

58

$3x^3 - 2x^2 - 6x + 4$

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

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

59

$x(x-a) - b(x-a)$

$(x-a)(x-b)$

$(x-a)(x-b)$

60

$x^2 + ax - bx - ab$

$x(x+a) - b(x+a)$

$(x+a)(x-b)$

61

$x^3 - 3x^2 + 4x - 12 =$

$x^2(x-3) + 4(x-3) =$

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

$2x^3 + 4x^2 - 5x - 10$

$2x^2 + 4x^2 - 5x - 10$

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

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

$cx - dx - cy + dy$

$x(c-d) - y(c-d)$

$(c-d)(x-y)$

end of 10.3

$ay + bx - by - ax$

$ay - by - ax + bx$

$y(a-b) - x(a-b)$

$(a-b)(y-x)$ $(b-a)(x-y)$

$ab - c - ac + b$

$ab - ac + (b-c)$

$a(b-c) + 1(b-c)$

$(b-c)(a+1)$

3 terms

$(x+3)(x+4)$

$x^2+4x+3x+12$

$x^2 + 7x + 12$

F O + I L

$1 \cdot 12$
$2 \cdot 6$
$3 \cdot 4$

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

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

$x^2 - 1x - 12$

$1 \cdot 12$
$2 \cdot 6$
$3 \cdot 4$

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

$4x$
$-3x$
$1x$

$x^2 - 2x - 8$ (1.8, 2.4)

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

$-4x$
$+2x$
$-2x$

$x^2 - 5x + 6$ (1.6, 2.3)

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

$(x-2)(x-3)$

$-2x$
$-3x$
$-5x$

$-1x$
$-4x$
$-5x$