Pre-Calculus 11
Chapter 4: Quadratic Equations

Factoring Review

Recall: Simplifying an algebraic expression can involve expanding brackets using multiplication
and collecting like terms.

<u>Example:</u>   Simplify each expression.

a) $2(x+5)$

$=2x+10$

b) $(x+2)(x+5)$

$=x^2+5x+2x+10$
$=x^2+7x+10$

c) $(x+5)(x-5)$

$=x^2-5x+5x-25$
$=x^2-25$

d) $2(x-1)(x+7)$

$=2(x^2+7x-1x-7)$
$=2(x^2+6x-7)$
$=2x^2+12x-14$

Recall: Factoring an algebraic expression means to express it as a product.

<u>Example:</u> Factor.

a) $6d-8$

$=2(3d-4)$

b) x^2-9

$=(x+3)(x-3)$

c) y^2-5y+6

$=(y-2)(y-3)$

d) $2m^2-50$

$=2(m^2-25)$
$=2(m+5)(m-5)$

e) $3x^2+21x+36$

$=3(x^2+7x+12)$
$=3(x+3)(x+4)$