

NAME: _____

Key

DATE: _____

HOUR: _____

Section 8.1 Introduction
Factoring Review

Simplify each of the following polynomials by factoring as much as you can:

1) $4x^2y - 12x^3y^4 + 2xy$ $2xy(2x - 6x^2y^3 + 1)$	2) $x^2 - 10x + 9$ $(x - 9)(x - 1)$	3) $x^2 - 100$ $(x - 10)(x + 10)$
4) $x^2 - 8x - 33$ $(x - 11)(x + 3)$	5) $x^4 - 1$ $(x^2 - 1)(x^2 + 1)$ $(x - 1)(x + 1)(x^2 + 1)$	6) $3x^4 - 6x$ $3x(x^3 - 2)$
7) $x^2 + 15x + 50$ $(x + 5)(x + 10)$	8) $2x^3 + 6x^2 + 4x$ $2x(x^2 + 3x + 2)$ $2x(x + 2)(x + 1)$	9) $27x^2 - 12$ $3(9x^2 - 4)$ $3(3x - 2)(3x + 2)$
10) $5x^2 + 13x - 6$ $5x^2 + 10x - 3x - 6$ $5x(x + 2) - 3(x + 2)$ $(5x - 3)(x + 2)$	11) $3x^2 + 11x + 6$ $3x^2 + 9x + 2x + 6$ $3x(x + 3) + 2(x + 3)$ $(3x + 2)(x + 3)$	12) $8x^3 - 36x^2 - 72x$ $4x(2x^2 - 9x - 18)$ $4x(2x^2 - 12x + 3x - 18)$ $4x(2x(x - 6) + 3(x - 6))$ $4x(2x + 3)(x - 6)$

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-12 3