Unit 4 Practice Test: Polynomials

K: _____ / 20	A: _____ / 50

Name:_____

PART A: KNOWLEDGE (20)

1. For the polynomial $x^3 + 4x^2 - 7x + 12$ **(4)**

   a) what is the coefficient of x? _____ b) what is the constant term? _____

   c) what is the degree of the polynomial? _____ d) how many terms are there? _____

2. Simplify this! **(4 x 2 ea. = 8)**

(a) $4(x - 3)$ (b) $(2x - 2) + (3x + 1)$ (c) $\frac{18y^3}{3y}$ (d) $(x +3)^2$

3. Factor this! **(4 x 2 ea. = 8)**

(a) $5x - 10$ (b) $4a^2 – 24ab$ (c) $x^2 + 8x + 15$ (d) $m^2 – 25$

PART B: APPLICATION (50)

1. Expand and Simplify !! **(5 x 3 ea. = 15)**

(a) $3(x^2 – 4x + 7) - (x + 2)^2$ (b) $(-3x^2y^2)(-2y^3)(-4x^3y)$ (c) $\frac{-25k^3g^2}{-5k^2g}$

(d) $(5x – 2)(x + 3) - (2x - 9)(3x – 2)$ (e) $(x – 8)^2 + 3(2x + 1)^2$

2. Factor this!!! (If possible) **(10 x 3 ea. = 30)**

(a) $54x^2 y^4 + 18xy^2$

(b) $ab + 3a + b + 3$

(c) $9x^2 – 24x + 16$

(d) $b^2 – 9b - 22$

(e) $6x^2 + 11x – 7$

(f) $x^2 + 5xy – 14y^2$

(g) $-2x^2 + 18x - 40$

(h) $x^4 + 16$

(i) $162m^3 – 50mn^2$

(j) $2x^2 – 7x + 3$

3. Write an expression for the area of the shaded region as a polynomial and then in factored form. **(5)**