Unit 4 Practice Test: Polynomials

Name: Answers

K: ____ / 20	A: ____ / 50

PART A: KNOWLEDGE (20)

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

a) what is the coefficient of x? -7

b) what is the constant term? $+12$

c) what is the degree of the polynomial? 3

d) how many terms are there? 4

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

(a) $4(x - 3)$ $= 4x - 12$

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

(c) $\frac{18y^3}{3y}$ $= 6y^2$

(d) $(x + 3)^2$ $= x^2 + 6x + 9$

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

(a) $5x - 10$ $= 5(x - 2)$

(b) $4a^2 - 24ab$ $= 4a(a - 6b)$

(c) $x^2 + 8x + 15$ $= (x + 3)(x + 5)$

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

PART B: APPLICATION (50)

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

(a) $3(x^2 - 4x + 7) - (x + 2)^2$ $= 2x^2 - 16x + 17$

(b) $(-3x^2y^2)(-2y^3)(-4x^3y)$ $= -24x^5y^6$

(c) $\frac{-25k^3g^2}{-5k^2g}$ $= 5kg$

(d) $(5x - 2)(x + 3) - (2x - 9)(3x - 2)$ $= -x^2 + 44x - 24$

(e) $(x - 8)^2 + 3(2x + 1)^2$ $= 13x^2 - 4x + 67$