

KING FAHD UNIVERSITY OF PETROLUUM AND MINERALS
Faculty of Science, Prep-Year Math Program
Math 001 - Term 041
Quiz # 2 (P4 & P5)

Name:

ID:

Sec.

Question1: Completely factor the following:

a) $1 - x - 2x^2$

Solution:

$$-(2x^2 + x - 1) = -(2x - 1)(x + 1)$$

b) $(x - 2)^3 + 1$

Solution:

$$[(x - 2) + 1][(x - 2)^2 - (x - 2) + 1]$$

$$(x - 1)(x^2 - 4x + 4 - x + 2 + 1)$$

$$(x - 1)(x^2 - 5x + 7)$$

c) $x^4 - 3x^3 - 8x + 24$

Solution:

$$(x^4 - 3x^3) - (8x - 24)$$

$$x^3(x - 3) - 8(x - 3)$$

$$(x - 3)(x^3 - 8)$$

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

$$d) x^2 + x - 9y^2 + \frac{1}{4}$$

Question2

For the polynomial $(2x-1)^3 + 2(x^2+2)(x^2-2)$, fill the following blanks.

- a) The standard form is _____.
- b) The degree is _____.
- c) The coefficient of x^2 is _____.
- d) The leading coefficient is _____.
- e) The constant term is _____.

Solution: