King Fahd University of Petroleum and Minerals
Prep-Year Math Program
Math (001)-Term (131)
Recitation R3
Answered by Sayed Omar

Question 1:

If $\frac{4x^3-3x^2+x+1}{x+2}=4x^2+mx+23+\frac{n}{x+2}$ find m and n.

Answer: $m=-11 \quad , \quad n=-45$

Question 2:

For the polynomial $(5x-3y+2)(5x+3y-2)$. If A is the coefficient of xy and N is the degree of the polynomial, then find $A+N$

Answer: $A+N=0+2=2$

Question 3:

Given the polynomial $f(x)=\left(2x^2-4x+2\right)^2-\left(2x^2-x\right)\left(2x^2+x\right)$

a) Write $f(x)$ in standard form. **Ans (a):** $f(x)=-16x^3+25x^2-16x+4$

b) Write down the following:

The leading coefficient	The constant Term	The coefficient of x^2	Degree
-16	4	25	3

Question 4:

If the Sum of the coefficients of x^3 and x^2 in the product $\left(x^2-2x+p\right)\left(x^2+kx-2\right)$ is -3 then $p-k$ is equal to

$(a)\ -3$ $(b)\ -4$ $(c)\ -1$

$(d)\ 1$ $(e)\ 9$

Answer: (d): 1

Question 5:

Which of the following is a polynomial

$(a)\ x^2-2x+2x^{-2}+3$ $(b)\ \frac{x^3+5}{x^{-1}-1}$

$(c)\ \sqrt{5}x^5-4x^3+\frac{1}{3}x-\sqrt{2}$ $(d)\ 4-\sqrt{9+x^2}$

$(e)\ x+\sqrt{x}$ $(f)\ x+x^{-1}-3$

Answer:
(a): No **(b):** No **(c):** Yes **(d):** No **(e):** No **(f):** No