

Course No: MATH103
 Course Title: College Algebra
 Date: 29 / 12 / 2010
 No. of Questions: (4)
 Time 120 Minutes (2 hr)
 Using Calculator (Yes)

University of Palestine



Final Exam
 1st quadmester 2010/2011
 Total Grade: 60

Instructor Name: Eng. Ahmed Abo absa
 Student No.: _____
 Student Name: _____
 College Name: IT
 Dep. / Specialist: _____
 Using Dictionary (No)

Exam Instruction: Answer all Questions

First Question	No. of Branches (1)	(10/60)
Q1 B1 :Choose The Correct Answers :(fill the answers in the table)		(10/60)
1. Determine whether the equation is an identity, a conditional equation, or an inconsistent equation. $3(5x + 29) = 15x + 87$ A. Identity B. Conditional equation C. Inconsistent equation		
2. Perform the indicated operations and write the result in standard form. $(7 + 8i)(3 - i) - (1 - i)(1 + i)$ A. $27 + 17i$ B. $31 + 17i$ C. $29 + 17i$ D. $27 + 31i$		
3. Which of the following functions best corresponds to the graph?		
4. Solve the matrix equation for X. Let $A = \begin{bmatrix} 3 & 2 \\ 0 & 1 \\ 6 & -7 \end{bmatrix}$ and $B = \begin{bmatrix} 8 & -8 \\ -3 & 2 \\ 0 & 5 \end{bmatrix}$; $B - X = 3A$		A. B. $X = \begin{bmatrix} -1 & -14 \\ -3 & -1 \\ -18 & 26 \end{bmatrix}$ $X = \begin{bmatrix} 17 & -2 \\ 3 & 5 \\ 18 & -16 \end{bmatrix}$ C. D. $X = \begin{bmatrix} -1 & -14 \\ 3 & -1 \\ -18 & 26 \end{bmatrix}$ $X = \begin{bmatrix} 17 & -2 \\ 3 & 5 \\ 6 & -16 \end{bmatrix}$
5. Use the graph or table to determine a solution of the equation. $x^3 + 6x^2 + 11x + 6 = 0$ A. $\{-3, -2, -1\}$ B. $\{-3, -1, 2\}$ C. $\{-3, -2, 1\}$ D. $\{-2, -1, 3\}$		

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6. Divide and express the result in standard form. $(5 + 2i) / (2 - 5i)$

- A. i B. $-i$ C. 1 D. -1

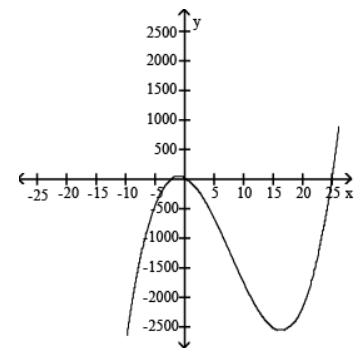
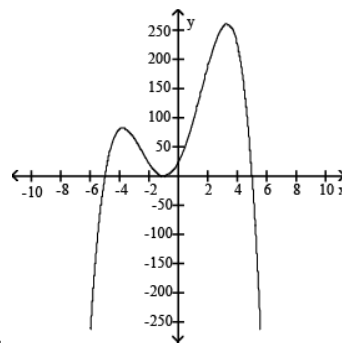
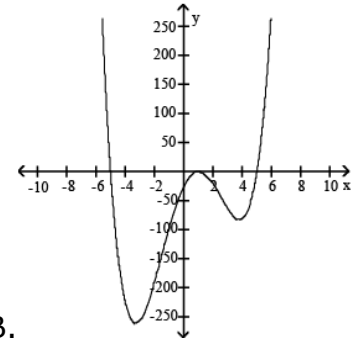
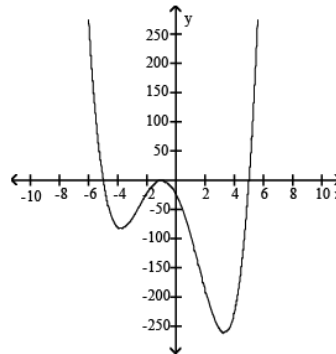
7. All proposed solutions for the equation:

$$\sqrt{14x - 7} = x + 3$$

- A. 4 B. 3 C. -4 D. -3

8. Which of the following graphs best corresponds to the function?

$$f(x) = (x + 1)^2(x^2 - 25)$$

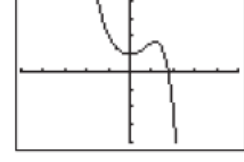
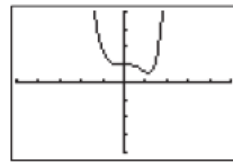
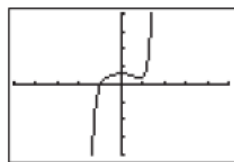
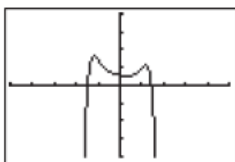


$$\begin{vmatrix} 4 & 0 & 0 \\ 4 & 7 & 9 \\ 9 & 3 & 4 \end{vmatrix}$$

- A. 4 B. 220 C. -4 D. 9

9. Evaluate the determinant.

10. Use end behavior to determine which of the following graphs is that at of $f(x) = x^9 - 2x^2 + 3$.



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Question (1)-Answers: (10/60)

Q	1	2	3	4	5	6	7	8	9	10
Ans.										

Second Question No. of Branches (2) (16 /60)

Q2 B1 Solve the equations by using one of **the Matrices Methods** **(8/16)**

$$x + 2y + 2z = 13$$

$$2x + y - z = 3$$

$$x - 4y + 3z = 11$$

بسم الله الرحمن الرحيم

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Q2 B2 Solve the equations by using Elimination or Substitution Method

(8/16)

$$x + 2y + 2z = 13$$

$$2x + y - z = 3$$

$$x - 4y + 3z = 11$$

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e) Graph.the function

Fourth Question

No. of Branches (1)

(15/60)

a. $e^{5x-1} = 20$

b. $\log_2 x + \log_2 (x - 6) = 4$

c. $e^{2x} - 4e^x - 21 = 0$

End of Questions
Good Luck