



Mid Term (Form A)

Fundamentals of Mathematics

Date: 17.4.2017

MATH 001

Student Name (ARABIC):

Student ID:

Instructor Name:

CRN :

**Instructions:**This exam duration is **1 hour**.

This is NOT an open book exam.

The use of calculators is permitted.

The use of mobile phones is NOT permitted.

Please answer all the **5** questions.The number of pages are **5 pages** including this page.**Marking Scheme:**

Question	Score	
1 (10 Marks)		
2 (2.5 Marks)		
3 (2.5 Marks)		
4 (2 Marks)		
5 (3 Marks)		<b>Signature</b>
<b>TOTAL</b>		

**Form A**

**Question 1:** (10 points)

Choose the correct answer, write your answer in the table below:

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1. The degree of the polynomial  $2x^4 - x^5 + 16$  is :

- a) 5                                      b) 16                                      c) 9                                      d) 2
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2. One of the following ordered pairs is a solution for the equation  $y = \frac{1}{3}x - 2$  :

- a)  $\left(\frac{1}{3}, -2\right)$                       b)  $\left(1, -\frac{1}{3}\right)$                       c)  $(3, -1)$                       d)  $(-2, 0)$
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3. The result of the multiplication  $(x^3 - y^2)(x^3 + y^2)$  is:

- a)  $2x^3 - 2y^2$                       b)  $x^6 - y^4$                       c)  $x^6$                       d)  $2x^3$
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4. The set of numbers for which the rational expression  $\frac{(x+5)(x-2)}{(x-1)(x+4)}$  is not defined is:

- a)  $\{-5, 2\}$                       b)  $\{-4, 1\}$                       c)  $\{-1, 4\}$                       d)  $\{-2, 5\}$
- 

5. The solution for the equation  $2(3x-1) - 4x = 6x + 2$  is :

- a) 3                                      b)  $-\frac{4}{5}$                                       c)  $-\frac{3}{4}$                                       d) -1
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6.  $GCF(x^2, x^2 - 1) =$

- a) 1                                      b)  $x^2$                                       c)  $x^2(x^2 - 1)$                       d) 0
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7. The factorization of  $x^3 + 2x^2 - 3x - 6$  is:

- a)  $(x+2)(x-3)$                       b)  $(x^2+2)(x-3)$                       c)  $(x+2)(x^2-3)$                       d)  $(x-2)(x-3)$
- 

8. The result of  $(x-2y)^2 - 4y^2$  is:

- a)  $x^2 - 8y^2$                       b)  $x^2 - 4xy$                       c)  $x^2$                       d)  $x^2 - 4xy + 8y^2$
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9. The simplest form for the rational expression  $\frac{x^2+5x+6}{x^2+x-2}$  is:

a)  $\frac{x+3}{x-1}$

b)  $\frac{5x+6}{x-2}$

c)  $4x+4$

d)  $\frac{x-3}{x+1}$

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10. If 25% of a number is 10, then 65% of the same number is equal to :

a) 40

b) 10

c) 20

d) 26

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Question	1	2	3	4	5	6	7	8	9	10
Answer										

**Form A**

**Question 2:** (2.5 points)

Perform and simplify the following:

$$\frac{x^2 + 4x - 21}{(x + 2)^2} \div \frac{x^2 - 49}{x^2 + 3x + 2}$$

**Question 3:** (2.5 points)

Solve the equation  $(x + 1)^2 = 25$

**Form A**

**Question 4:** (2 points)

Solve the following inequality:

$$\frac{x}{5} + \frac{2x}{15} + 2 \geq \frac{x}{10} + 1$$

**Question 5:** (3 points)

Graph the equation  $y = -\frac{x}{3} + 2$

