Name: .....
ID: .....
Group: .....
Subject: Math.
Date: Saturday 16 / 3 / 2013
Mid –Term Exam

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Question 1 (12 marks): Choose the correct answer and write them in the table below:

1) The result of $(-3a + 10a)$ is :

A (13a) B $(-13a)$ C (7a) D (-7a)

---

2) The slope of the line containing the point (2, 7) and (-2, 3) is:

A $(\frac{-5}{2})$ B $(\frac{-3}{4})$ C $(\frac{-4}{4})$ D (1)

---

3) The solution for the equation $x + y = -3$ is:

A $(-1, -2)$ B $(1, 2)$ C $(-1, 2)$ D $(1, -2)$

---

4) The slope for the horizontal line is:

A (0) B $(not\ define)$ C (1) D $(\frac{1}{2})$

---

5) The result of $(2x^3)^4$ is:

A $(2x^{12})$ B $(16x^{12})$ C $(16x^7)$ D $(2x^7)$

---

6) The value of $|x - 2|$ when $x = -3$ is:

A (-5) B (5) C (-1) D (1)

---

7) The degree of the polynomial $9x^3 - 10x^4 + 3x + 7x^2 - 5$ is:

A (9) B (3) C (4) D (2)

---

8) The scientific notation of the number 45200000000 is:

A (4.52×10^{10}) B (4.52×10^{-10}) C (452×10^8) D (452×10^{-8})

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9) The factorization of $x^2 - 16$ is:

A $(x-4)(x-4)$ B $(x+4)(x+4)$ C $(x-4)(x+4)$ D $(x-2)(x-8)$

---

10) The $x-intercepts$ of the equation $x+y=2$ is:

A $(2,0)$ B $(0,2)$ C $(1,0)$ D $(0,1)$

---

11) The excluded values of $\frac{x^2}{x+1}$ are:

A $(x=1)$ B $(x=-1)$ C $(x=0)$ D $(x=0 \text{ and } x=-1)$

---

12) The opposite of -34 is:

A (-34) B $(\frac{1}{34})$ C $(\frac{-1}{34})$ D (34)

Question	1	2	3	4	5	6	7	8	9	10	11	12
Answer	C	D	A	A	B	B	C	A	C	A	B	D

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Question 2: (3 marks)

Perform and simplify the following :

1) $\frac{x-3}{x^2-9}$ **such that** $x \neq \mp 3$

$$\frac{(x-3)}{(x-3)(x+3)} = \frac{1}{(x+3)}$$

---

2) $(x+2)(x+4)$

$$x^2 + 2x + 4x + 8$$

$$x^2 + 6x + 8$$

3) $(5x^2 + 2x + 1) + (-2x^2 - 3x + 7)$

$$5x^2 + 2x + 1 - 2x^2 + 3x + 7$$

$$3x^2 - x + 8$$

Question 3: (2marks)

Solve the equation $x^2 - 9x + 14 = 0$

$$(x-2)(x-7) = 0$$

$$x-2 = 0 \longrightarrow \boxed{x = 2}$$

$$x-7 = 0 \longrightarrow \boxed{x = 7}$$

Question 4: (1 mark)

Find the GCF and the LCM of : $3x^2$, x^4

GCF = x^2

LCM = $3x^4$

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Question 5: (2 marks)

Graph $y = x+3$

x	Y
1	4
0	3
-3	0