

Name:

ID:

Group:

Subject:

Date: Sunday 17 / 03 / 20 13

Mid-Term Exam (Second Term)

Question I / Choose the correct answers and write them in the table below (1 point for each)

1/ The value of $x^0 + 10$, when $x = 12$, is:

- a) 22 b) 10 **c) 11** d) 21

2/ The solution of $-6 + x = 17$ is:

- a) $x = 11$ b) $x = -11$ **c) $x = 23$** d) $x = -23$

3/ "is" translates to:

- a) "="** b) " $\times 0.01$ " c) any letter d) " \times "

4/ The scientific notation of 0.000000405 is:

- a) 40.5×10^7 b) 4.05×10^7 **c) 4.05×10^{-7}** d) 4.05×10^{-8}

5/ An ordered pair solution of the equation $2x + y = -1$ is:

- a) (-1, 1)** b) (1, 1) c) (-1, -1) d) (1, -1)

6/ In which quadrant, the point (6, -3) is located?

- a) III b) I **c) IV** d) II

7/ The expression of $(-5x^4y^{-3})$, using positive exponents, is:

- a) $(-5x^4y^3)$ b) $13(5x^4y^3)$ **c) $(-5\frac{x^4}{y^3})$** d) $(5\frac{x^4}{x^3})$

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8/ "x is at least 5" means:

- a) $x < 5$ b) $x \leq 5$ c) $x > 5$ d) $x \geq 5$

9/ The GCF of $(35x^3, 7x^5, 21x^2)$

- a) $7x^3$ b) $21x$ c) $7x^2$ d) $35x^2$

10/ Which of the following expressions is a difference of squares ?

- a) $x^2 + 16$ b) $x^2 + 100$ c) $4x^2 - 10y^2$ d) $9x^2 - 16y^2$

11/ The LCM of $(12x^4, 27x^7)$ is:

- a) $108x^7$ b) $108x^4$ c) $108x^{11}$ d) $108x^3$

12/ The graph of $y = b$ is:

- a) An horizontal line b) a vertical line c) an x-intercept d) a y-intercept

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

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Question 2/ Collect like terms, then arrange in descending order and write the degree of the polynomial

(2 points)

$$-x - 5x^2 - 8x + 14x^2 + 11x^4 - x - 3x^4$$

$$8x^4 + 9x^2 - 10x$$

Degree : 4

Question 3 / Remove Parentheses and simplify

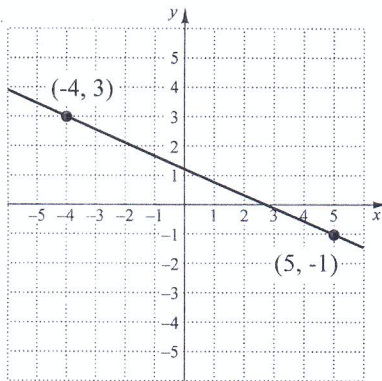
(1 point)

$$(7 + 3x + 8x^2 + 9x^3) - (3 - 9x - 8x^2 - 9x^3)$$

$$7 + 3x + 8x^2 + 9x^3 - 3 + 9x + 8x^2 + 9x^3$$
$$18x^3 + 16x^2 + 12x + 4$$

Question 4 / Find the slope

(1 point)



$$m = -\frac{4}{9}$$

Question 5/ Determine whether $(x^2 + 10x + 25)$ is a trinomial square? then factor it, if it is possible

(2 points)

$$\sqrt{x^2} = x$$
$$\sqrt{25} = 5$$
$$2 \times 5x = 10x \Rightarrow \text{Trinomial Square}$$
$$[x + 5]^2$$

Question 6 / Solve the quadratic equation $3x^2 + 13x - 10 = 0$

(2 points)

$$(3x - 2)(x + 5) = 0$$

$$3x - 2 = 0 \rightarrow x = \frac{2}{3}$$

$$x + 5 = 0 \rightarrow x = -5$$