Question 1: **Choose the correct answer write your answer in the table below (10 Marks)**

1) Evaluate $a^2 - 3$, when $a = -4$.

     a) -19   b) 19   c) -13   **d) 13**

2) c subtracted from a

     a) c - a   **b) a - c**   c) c + a   d) c < a

3) Solve: $2x+3 = 39$

     a) -18   b) -29   c) 29   **d) 18**

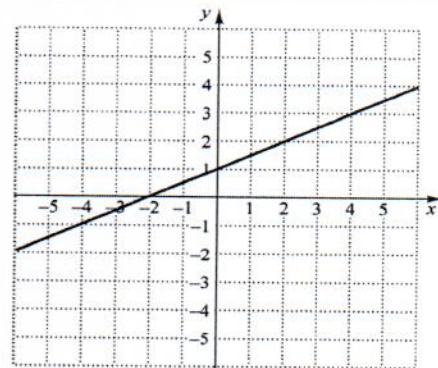4) 34 is 25% of what number?

     a) 85   b) 13.6   c) 8.5   **d) 136**

5) Determine whether the given ordered pair is a solution of the equation $5x - y = 3$

     a) (1, 5)   b) (−2, 4)   **c) (0, −3)**   d) (4, 5)

6) The slope of the line in the figure is :

     a) 2   **b) $\frac{1}{2}$**   c) $-\frac{1}{2}$ d) -2

7) The Degree of a polynomial $9x^3y^2 - 10x^5y + 4x + 7x^2 + 10$ is

     a) 2   b) 3   **c) 5**   d) 6

8) Convert to scientific notation   203,100,000,000,000

   a) 20.31×10^{13} b) 2.031×10^{13} c) 20.31×10^{14} **d) 2.031×10^{14}**

9)   Factor $3x^6 + 12x^4$

   a) $3(x^6 + 4x^4)$ b) $x^4(3x^2 + 12)$

   c) $x^2(3x^4 + 12x^2)$ **d) $3x^4(x^2 + 4)$**

10) Find the GCF of $(4x^5, 6x^3)$.

   a) $24x^5$ b) $6x^5$ c) $4x^3$ **d) $2x^3$**

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

Question 2 (3 Marks)

1- Solve the inequality $5 - 10y \le 3 - 9y$

$$9y - 10y \le 3 - 5 \implies -y \le -2$$
$$= \boxed{y \ge 2}$$

2- Collect like terms and then arrange in descending order $-x - 5x^2 - 8x + 14x^2 + 11 - x^3$

$$-x^3 + 9x^2 - 9x + 11$$

3- Remove Parentheses and simplify $(x^4 + 5x^3 - 2) - (5x^4 + 3x^3 + 2x^2 - x + 5)$

$$= x^4 + 5x^3 - 2 - 5x^4 - 3x^3 - 2x^2 + x - 5$$
$$= -4x^4 + 2x^3 - 2x^2 + x - 7$$

Question 3 Division of polynomials (2 Marks)

$$\frac{24x^5 - 3x^4 + 6x^3 - 9x^2}{3x^2}$$
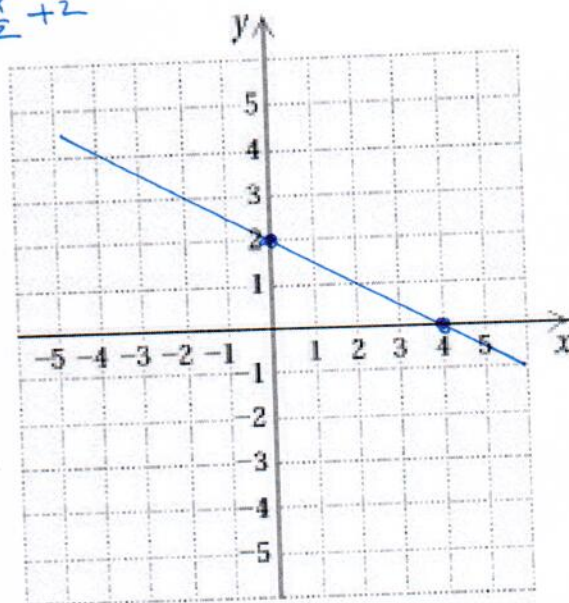
$$= 8x^3 - x^2 + 2x - 3$$

Question 4 (3 Marks)

Graph the equation $x + 2y = 4$ **and Identify the y-intercept and x-intercept**

$$2y = -x + 4 \Rightarrow y = -\frac{x}{2} + 2$$

X	0	4
y	2	0

$$x\text{-intercept} = (4, 0)$$
$$y\text{-intercept} = (0, 2)$$

Question 5 (2 Marks)

Solve : $3x^2 + 5x = 2$

$$\Rightarrow 3x^2 + 5x - 2 = 0$$

$$\Rightarrow (3x - 1)(x + 2) = 0$$

$$3x - 1 = 0 \qquad x + 2 = 0$$
$$3x = 1 \qquad x = \boxed{-2}$$
$$x = \boxed{\frac{1}{3}}$$

$$\left\{ \frac{1}{3} , -2 \right\} = \text{الحل}$$