Math – Quiz 6 (10 marks)

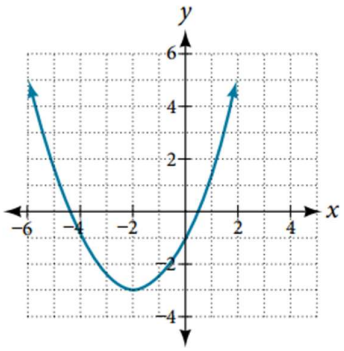
Student's Name: _____

Grade 11th

مدارس البكالوريا
BACCALAUREATE SCHOOLS

12th November, 2025

Q1) Write the equation of the shown parabola in both <u>Standard form</u> and <u>Vertex form</u> ?



Q2) Find the domain and range of the following:

$$f(x) = -5x^2 + 9x - 1$$

$$f(x) = 2\left(x - \frac{4}{7}\right)^2 + \frac{8}{11}$$

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Q3)

The unit price of an item affects its supply and demand. That is, if the unit price goes up, the demand for the item will usually decrease. For example, a local newspaper currently has 84,000 subscribers at a quarterly charge of $30. Market research has suggested that if the owners raise the price to $32, they would lose 5,000 subscribers. Assuming that subscriptions are linearly related to the price, what price should the newspaper charge for a quarterly subscription to maximize their revenue?

Q4) Find the x and y intercepts of the following

$f(x) = 3x^2 + 5x - 2.$

$f(x) = 2x^2 + 4x - 4$