

Name: _____ Date: _____

Polynomial Word Problems

Solve the following word problems involving polynomials.

1. Area of a Rectangle: The length of a rectangle is $x + 5$ and the width is $x - 2$. Write a polynomial expression for the area of the rectangle.

2. Profit Calculation: A company's profit in dollars is given by $\mathcal{P}(x) = 3x^2 - 6x + 4$, where x is the number of units produced. What is the profit when 10 units are produced?

3. Parabolic Path: The height h of a projectile is given by $(t) = -5t^2 + 20t + 30$, where t is the time in seconds. Find the maximum height reached by the projectile.

4. Product of Consecutive Numbers: The product of two consecutive numbers is $x(x + 1) = 42$. Find the numbers.