Chapter 2 Class 9 Polynomials - MCQ Worksheet 1 by teachoo

Chapter: Chapter 2 Class 9 Maths – Polynomials

Name: _____

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1. A gardener is designing a rectangular flower bed. The length is described by the expression $l(x) = 2x + 5$ and the width by $w(x) = 3x$. Which of the following expressions represents the area of the flower bed, and what type of polynomial is it?

a) $6x^2 + 15x$, Quadratic

b) $5x + 5$, Linear

c) $6x^2 + 15x$, Cubic

d) $10x$, Monomial

2. The trajectory of a thrown ball is modelled by the polynomial $h(t) = -5t^2 + 10t + 2$, where h is the height in meters and t is the time in seconds. What does the constant term ' 2 ' in the polynomial represent?

a) The maximum height the ball reaches.

b) The time it takes for the ball to hit the ground.

c) The initial height from which the ball was thrown.

d) The speed of the ball.

3. The perimeter of a triangle is $P(x) = 6x^2 + 4x + 8$. Two of its sides are given by the expressions $s_1(x) = 3x^2 + x - 3$ and $s_2(x) = 2x^2 + 6x$. What is the length of the third side?

a) $x^2 - 3x + 11$

b) $x^2 + 5x + 5$

c) $9x^2 + x - 3$

d) $x^2 - 3x - 3$

4. A polynomial $p(x) = (x - a)$ is a factor of the polynomial $q(x) = x^3 - a^3$. This is visually represented by the fact that:

a) The graph of $q(x)$ is a straight line.

b) The graph of $q(x)$ touches the x-axis at $x = a$.

c) The graph of $q(x)$ has a value of 0 when $x = a$.

d) The graph of $q(x)$ is always positive.

5. The volume of a box is given by $V(x) = x^3 - 4x$. Which of the following cannot be a dimension of the box if x is a positive integer greater than 2 ?

a) x

b) $x - 2$

c) $x + 2$

d) $x - 4$

6. The number of bacteria in a culture is modelled by $N(t) = 500 + 20t$, where t is the time in hours. Which statement is true about this model?

a) It is a quadratic polynomial, showing exponential growth.

b) It is a linear polynomial, showing constant growth rate.

c) The initial number of bacteria was 20 .

d) The number of bacteria decreases over time.

7. The expression for the area of a square is $A(x) = x^2 - 8x + 16$. What is the expression for the side length of the square?

a) $x + 4$

b) $x - 4$

c) $x - 8$

d) $x^2 - 4$

8. A company's profit is given by $P(x) = -x^2 + 10x - 25$, where x is the number of units sold. For what value of x does the company break even (i.e., make zero profit)?

a) $x = 10$

b) $x = 2$

c) $x = 5$

d) $x = 25$

9. The polynomial $d(t) = 100 - 4.9t^2$ represents the distance an object falls from a height of 100 meters. What is the degree of this polynomial and what does it signify?

a) Degree 1, constant speed.

b) Degree 2, speed changes due to acceleration.

c) Degree 100, the initial height.

d) Degree 0 , it is a constant.

10. If the zeroes of a quadratic polynomial are the dimensions of a rectangle, and the zeroes are -5 and 4 , which statement is conceptually flawed?

a) The area of the rectangle is 20 .

b) The polynomial could be $x^2 + x - 20$.

c) A dimension of a physical object cannot be negative.

d) The perimeter is 18 .

Important links

- Answer of this worksheet - https://www.teachoo.com/25596/5364/MCQ---Worksheet-1/category/Teachoo-Questions---MCQs/
- Full Chapter with Explanation, Activity, Worksheets and more – https://www.teachoo.com/subjects/cbse-maths/class-9th/ch2-9th-polynomials/
- Science Class 9 – https://www.teachoo.com/subjects/science/class-9/
- Maths Class 9- https://www.teachoo.com/subjects/cbse-maths/class-9th/