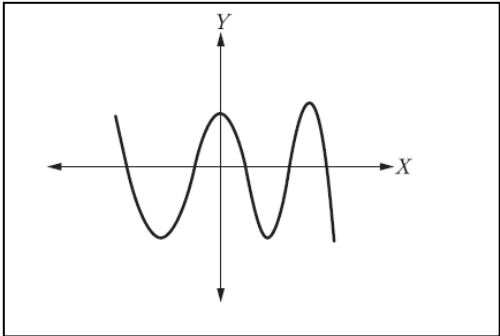


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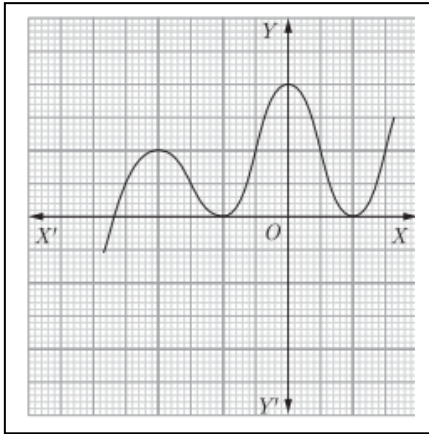
Class X, Mathematics

Worksheet-Polynomials 27 - 04 - 2023

Q. No.	Questions of 1 Mark each. (MCQ's)							
1.	If α and β are the zeroes of the polynomial $x^2 - 5x + 7$, the value of $\alpha + \beta + \alpha\beta$ is:							
	A	2	B	12	C	-2	D	7
2.	A quadratic polynomial whose zeroes are -1 and $\frac{3}{2}$ is:							
	A	$2x^2 - x - 3$	B	$2x^2 + x - 3$	C	$2x^2 - x + 3$	D	$2x^2 - 2x - 3$
3.	If one zero of the polynomial $(3x^2 + 8x + k)$ is the reciprocal of the other, then the value of k is:							
	A	-3	B	3	C	$\frac{8}{3}$	D	9
4.	If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is:							
	A	4	B	-4	C	10	D	-10
5.	What is the value of x , for which the polynomials $x^2 - 1$ and $x^2 - 2x + 1$ vanish simultaneously?							
	A	-1	B	1	C	0	D	2
6.	If a and b are zeroes and the quadratic polynomial $f(x) = x^2 - x - 4$, then the value of $\frac{1}{a} + \frac{1}{b} - \alpha\beta$ is:							
	A	$\frac{17}{4}$	B	5	C	$\frac{15}{4}$	D	-5
7.	The number of zeroes of $p(x)$ is:							
								
	A	5	B	4	C	3	D	2

8.	If the product of zeroes of the polynomial $ax^2 - 6x - 6$ is 4, the value of 'a' is:							
	A	$\frac{3}{2}$	B	$\frac{2}{3}$	C	$\frac{-3}{2}$	D	$\frac{-2}{3}$
9.	If α and $\frac{1}{\alpha}$ are the zeroes of the polynomial $3x^2 + x + (k - 2)$ the value of k is:							
	A	0	B	3	C	1	D	5
10.	A quadratic polynomial whose sum of zeroes is $\frac{-2}{3}$ and product of zeroes is -3 is:							
	A	$3x^2 + 2x - 9$	B	$3x^2 - 2x - 9$	C	$3x^2 + 2x + 9$	D	$-3x^2 + 2x - 9$
11.	If α and β are the zeros of the polynomial $x^2 - 5x + m$ such that $\alpha - \beta = 1$, the value of m is:							
	A	5	B	6	C	3	D	2
12.	The zeroes of the polynomial $x^2 - 3x - m(m+3)$ are:							
	A	m, m+3	B	-m, m+3	C	m, -(m + 3)	D	-m, -(m + 3)
13.	Given $m + 2$, where m is a positive integer, is a zero of the polynomial $q(x) = x^2 - mx - 6$. Which of these is the value of m?							
	A	4	B	3	C	2	D	1
14.	The value of τ for which $(x^2 + 4x + \tau)$ is a perfect square is:							
	A	16	B	9	C	1	D	4
15.	A quadratic polynomial, whose zeroes are -3 and 4 is:							
	A	$x^2 - x + 12$			B	$x^2 + x + 12$		
	C	$\frac{x^2}{2} - \frac{x}{2} - 6$			D	$2x^2 + 2x - 24$		
DIRECTION: In the following questions, a statement of assertion (A) is followed by statement of Reason (R) . Choose the correct option								
(a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A) (b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A) (c) Assertion (A) is true but reason (R) is false. (d) Assertion (A) is false but reason (R) is true.								

16.	Assertion(A): The polynomial $x^2 + 4x$ has 2 real zeroes. Reason(R): Zeroes of the polynomial $x^2 + ax$; ($a \neq 0$) are a and 0 .
17.	Assertion(A): If $(2 - \sqrt{3})$ is one zero a quadratic polynomial then other zero will be $(2 + \sqrt{3})$. Reason(R): Irrational zeroes always occur in pairs.
18.	Assertion(A): The degree of the polynomial $(x + 3)^3$ is 2. Reason(R): The degree of a polynomial is the highest power of the variable in that polynomial.
19.	Assertion(A): If both zeroes of quadratic polynomial $x^2 - 2kx + 2$ are equal in magnitude but opposite in sign, the value of k is 2. Reason(R): Sum of zeroes of a quadratic polynomial $ax^2 + bx + c$ is $-\frac{b}{a}$.
20.	Assertion(A): The graph $y = f(x)$ is shown in the figure, for the polynomial $f(x)$. The number of zeroes of $f(x)$ is 3. Reason(R): The number of zeroes of the polynomial $f(x)$ is the number of points on which $f(x)$ intersects the X axis.



Answers

Answers	1	B	2	A	3	B	4	D
	5	B	6	C	7	A	8	C
	9	D	10	A	11	B	12	B
	13	D	14	D	15	C	16	c
	17	a	18	d	19	d	20	a