



# MATHEMATICS - 10TH

**IMPORTANT MCQ'S – MATHS (10TH GRADE)**



## POLYNOMIALS



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Material Curated by  
Er. Sonal Agrawal Sir  
Ex. Scientist , BARC Mumbai



## 10th - Maths

SN		Marks
1	Define linear polynomial. ( a) A polynomial of degree 1. ( c) A polynomial of degree 3.	1 ( b) A polynomial of degree 2. ( d) NONE OF THESE
2	Define cubic polynomial. ( a) A polynomial of degree 1. ( c) A polynomial of degree 3.	1 ( b) A polynomial of degree 2. ( d) NONE OF THESE
3	If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of $k$ is: ( a) 10 ( c) 5	1 ( b) -10 ( d) -5
4	State whether the statement is true or false : $8x^2 - 5x + 3$ is a polynomial in $x$ of degree 2. ( a) TRUE	1 ( b) FALSE
5	A polynomial of degree 2 is called a _____ polynomial. ( a) biquadratic ( c) linear	1 ( b) cubic ( d) quadratic
6	A polynomial of degree 1 is called a _____ polynomial. ( a) biquadratic ( c) linear	1 ( b) cubic ( d) quadratic
7	Let $p(x) = x^2 - 2x - 3$ . Find $p(3)$ . ( a) 2 ( c) -2	1 ( b) 0 ( d) 3
8	If $f(x) = x^3 - 6x^2 + 11x - 6$ , then its value at $x = 2$ is ( a) 3	1 ( b) 0

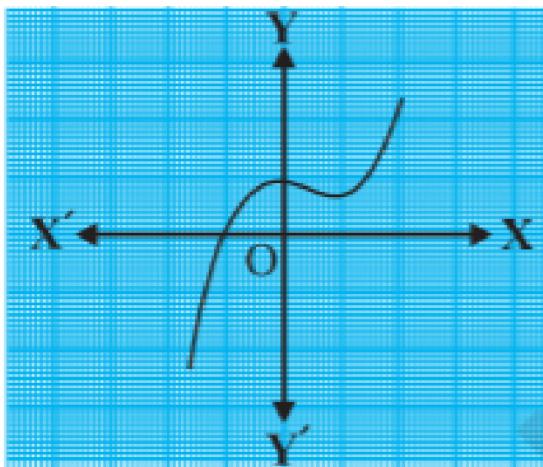


( c ) -1

( d ) 2

9

1



(i)

Look at the graph given above. The graph of  $y = p(x)$ , where  $p(x)$  is a polynomial. Here, find the number of zeroes of  $p(x)$ .

( a ) 1

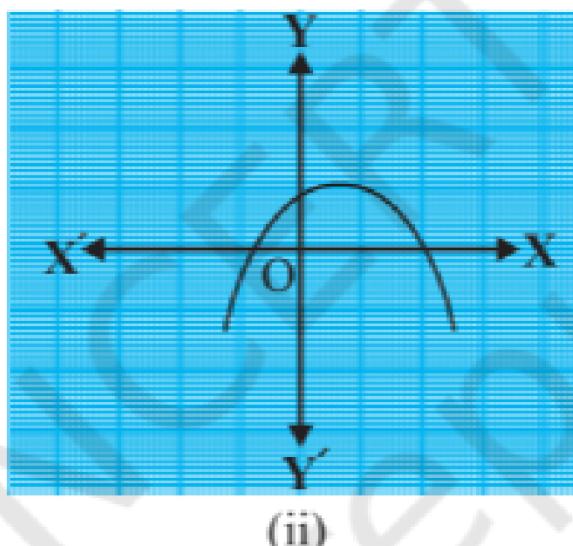
( b ) 2

( c ) 3

( d ) 4

10

1



(ii)

Look at the graph given above. The graph of  $y = p(x)$ , where  $p(x)$  is a polynomial. Here, find the number of zeroes of  $p(x)$ .

( a ) 1

( b ) 2



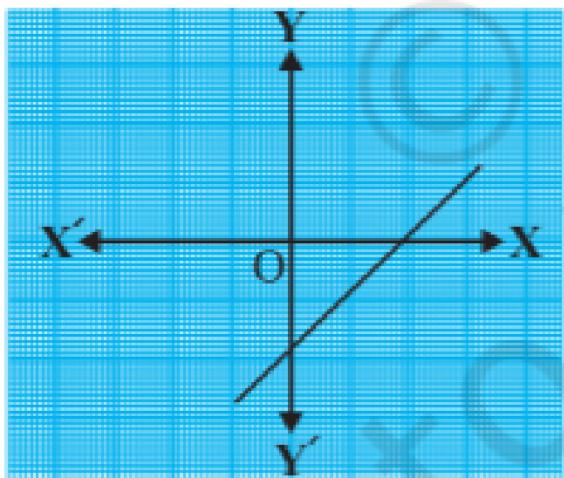


( c ) 3

( d ) 4

11

1



(iv)

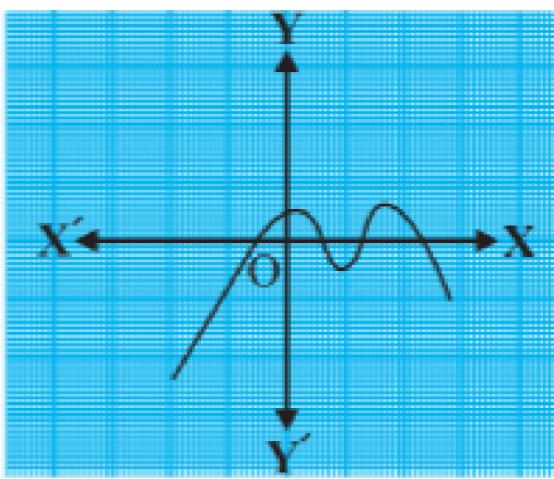
Look at the graph given above. The graph of  $y = p(x)$ , where  $p(x)$  is a polynomial. Here, find the number of zeroes of  $p(x)$ .

- ( a ) 1
- 
- ( c ) 3

- ( b ) 2
- 
- ( d ) 4

12

1



(vi)

Look at the graph given above. The graph of  $y = p(x)$ , where  $p(x)$  is a polynomial. Here, find the number of zeroes of  $p(x)$ .

- ( a ) 1
- 
- ( b ) 2





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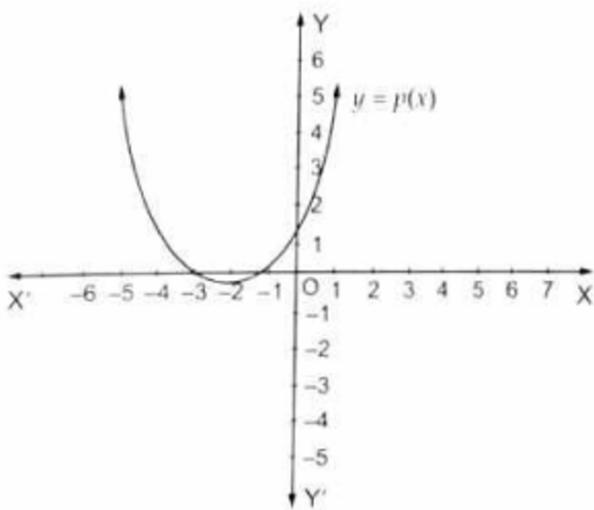
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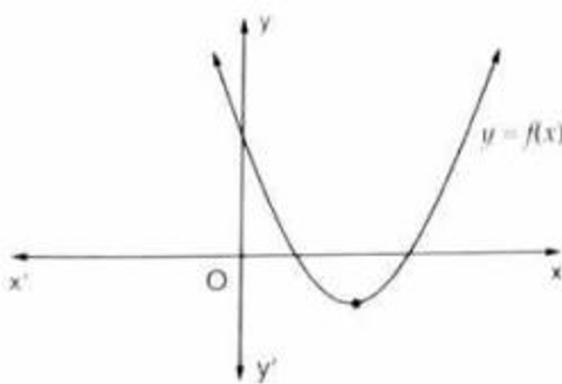
- ( c ) 3 ( d ) 4



From the above figure, the graph of a polynomial  $p(x)$  is given. Find the zeroes of the polynomial.



- 15   1



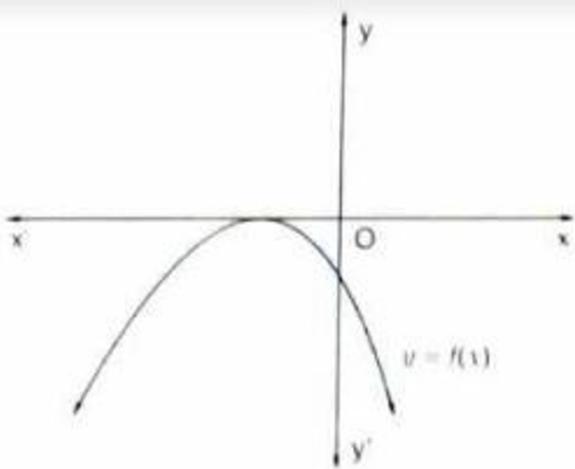
From the above figure, the graph of the polynomial  $f(x) = ax^2 + bx + c$  is given. Write the signs of 'a' and  $b^2 - 4ac$ .

- $$(a) a > 0 \text{ and } b^2 - 4ac < 0 \quad (b) a > 0 \text{ and } b^2 - 4ac > 0$$

( c )  $a < 0$  and  $b^2 - 4ac < 0$

( d ) None of these

16



1

From the above figure, the graph of the polynomial  $f(x) = ax^2 + bx + c$  is given. Write the sign of  $c$ .

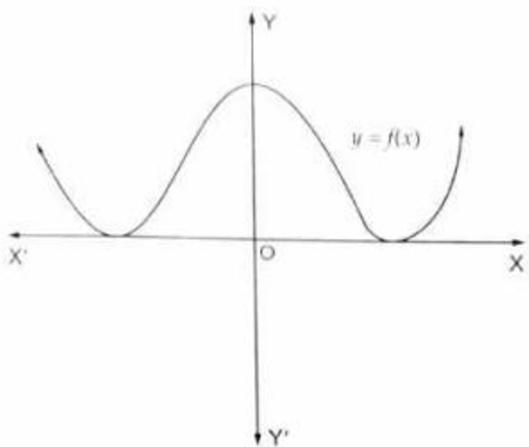
( a )  $c < 0$

( b )  $c > 0$

( c )  $c = 0$

( d ) None of these

17



1

From the above figure, the graph of a polynomial  $f(x)$  is given. Write the number of real zeroes of  $f(x)$ .

( a ) 1

( b ) 2

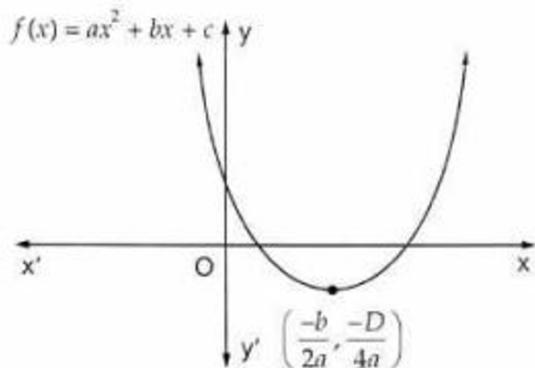
( c ) 3

( d ) 4

18

1

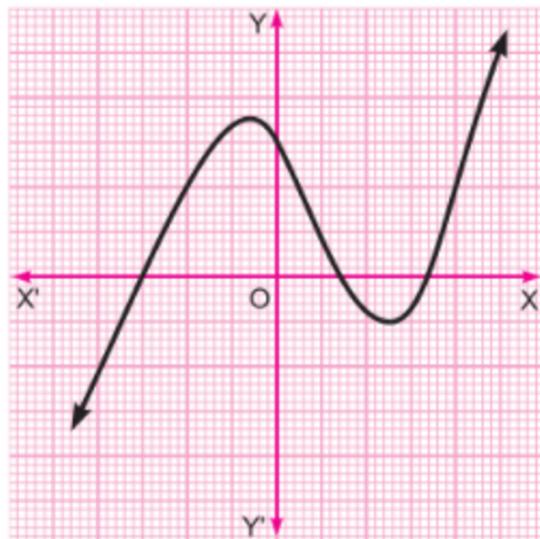




From the above figure, a polynomial  $f(x) = ax^2 + bx + c$  is shown, then

- |                                  |                                  |
|----------------------------------|----------------------------------|
| ( a ) $a < 0, b > 0$ and $c > 0$ | ( b ) $a < 0, b < 0$ and $c > 0$ |
| ( c ) $a < 0, b < 0$ and $c < 0$ | ( d ) $a > 0, b > 0$ and $c < 0$ |

19



1

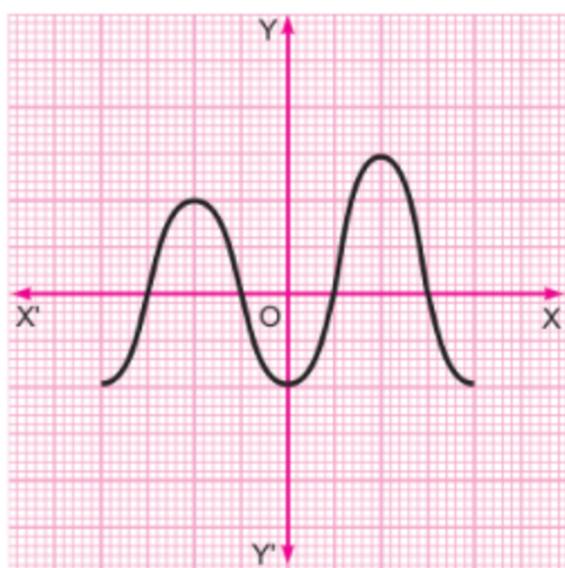
The graph of  $y=p(x)$  for a polynomial is given above. Find the number of zeroes.

- |         |         |
|---------|---------|
| ( a ) 1 | ( b ) 2 |
| ( c ) 3 | ( d ) 4 |

20

1



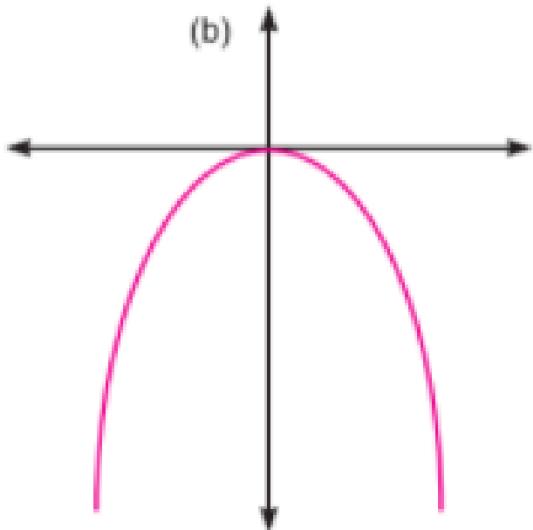


The graph of  $y=p(x)$  for a polynomial is given above. Find the number of zeroes.

- |         |         |
|---------|---------|
| ( a ) 1 | ( b ) 2 |
| ( c ) 3 | ( d ) 4 |

21

1



Find the number of real zeroes of the polynomials represented by the above figure.

- |         |         |
|---------|---------|
| ( a ) 0 | ( b ) 1 |
| ( c ) 2 | ( d ) 3 |

22

Find the zeroes of the quadratic polynomial  $2x^2 - 8x + 6$ .

1

- |              |               |
|--------------|---------------|
| ( a ) 1 & -3 | ( b ) -1 & -3 |
| ( c ) 1 & 3  | ( d ) -1 & 3  |





23	Find the zeroes of the quadratic polynomial $x^2 - 2x - 8$ . ( a) 4, 2 ( b) -4, 2 ( c) 4,-2 ( d) -4,-2	1
24	Find a quadratic polynomial, the sum and product of whose zeroes are $\frac{1}{4}$ and -1, respectively. ( a) $3x^2 - x - 4$ ( b) $4x^2 - x - 4$ ( c) $3x^2 - x$ ( d) $3x^2 - 4x - 2$	1
25	If the zeroes of the polynomial $x^3 - 3x^2 + x + 1$ are $a - b$ , $a$ , $a + b$ , then $a$ and $b$ are 1 and $\pm\sqrt{2}$ . ( a) NO ( b) YES	2
26	Find the zeroes of the polynomial: $2x^2 + \frac{7}{2}x + \frac{3}{4}$ ( a) $\frac{3}{2}$ or $-\frac{1}{4}$ ( b) $-\frac{3}{2}$ or $-\frac{1}{4}$ ( c) $-\frac{3}{2}$ or $\frac{1}{4}$ ( d) $\frac{3}{2}$ or $\frac{1}{4}$	1
27	Find the zeroes of the polynomial: $y^2 + \frac{3}{2}\sqrt{5}y - 5$ ( a) $2\sqrt{5}$ or $-\sqrt{\frac{5}{2}}$ ( b) $-2\sqrt{5}$ or $\frac{\sqrt{5}}{2}$ ( c) $-2\sqrt{5}$ or $-\sqrt{\frac{5}{2}}$ ( d) $2\sqrt{5}$ or $\sqrt{\frac{5}{2}}$	1
28	Find the zeros of the polynomial $\sqrt{3}x^2 - 8x + 4\sqrt{3}$ . ( a) -4, $\frac{3}{2}$ ( b) $\frac{3}{2}$ , $-\frac{1}{3}$ ( c) $-\sqrt{2}$ , $\sqrt{2}$ ( d) $2\sqrt{3}$ , $\frac{2}{\sqrt{3}}$	2
29	Find the zeros of the quadratic polynomial : $2\sqrt{3}x^2 - 5x + \sqrt{3}$ ( a) $\frac{\sqrt{3}}{2}$ , $\frac{1}{\sqrt{3}}$ ( b) $\frac{\sqrt{3}}{4}$ , $\frac{2}{\sqrt{3}}$ ( c) $\frac{\sqrt{3}}{2}$ , $-\frac{1}{\sqrt{3}}$ ( d) $\frac{\sqrt{3}}{4}$ , $-\frac{1}{\sqrt{3}}$	1
30	If 3 is a zero of the polynomial $2x^2 + x + k$ , find the value of k	1





- ( a)  $k = -21$   
 ( c)  $k = -8$

- ( b)  $k = -9$   
 ( d)  $k = -11$

31	If $\alpha$ and $\beta$ are the zeros of the polynomial $x^2 + x - 2$ , find the value of $\frac{1}{\alpha} - \frac{1}{\beta}$	3
	( a) $-\frac{3}{2}$ ( c) $\frac{3}{2}$	( b) $\frac{1}{2}$ ( d) None of the above

32	If $\alpha$ and $\beta$ are the zeros of the polynomial $5x^2 - 7x + 1$ , find the value of $\frac{1}{\alpha} + \frac{1}{\beta}$	3
	( a) 9 ( c) 8	( b) 7 ( d) 5

33	If $\alpha$ and $\beta$ are the zeros of the polynomial $x^2 + 5x + 8$ then the value of $\alpha + \beta$ is	1
	( a) 5 ( c) -5	( b) -8 ( d) 8

34	If $\alpha, \beta$ are the zeros of the polynomial $2x^2 + 5x + k$ such that $\alpha^2 + \beta^2 + \alpha\beta = \frac{21}{4}$ then $k = ?$	3
	( a) 2 ( c) -2	( b) 3 ( d) -3

35	If $\alpha$ and $\beta$ are the zeros of the quadratic polynomial $f(x) = ax^2 + bx + c$ , then evaluate: $\frac{\alpha^2}{\beta} + \frac{\beta^2}{\alpha}$ ( a) $\frac{3abc+b^3}{a^2c}$ ( c) $\frac{3bc+b^3}{a^2}$	3
		( b) $\frac{3abc-b^3}{a^2c}$ ( d) $\frac{4bc+b^2}{a^2}$



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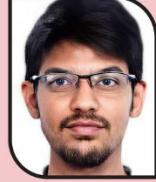
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बिलासपुर | छात्र मनु कश्यप और मनीष कुमार सिंह का चयन इंटेल प्राइवेट लिमिटेड के लिए हुआ है। कंपनी इन छात्रों को सालाना 21 लाख रुपए का पैकेज दे रही है। ये दोनों छात्र सत्र 2017 में सीयू के इलेक्ट्रॉनिक्स एंड कम्प्युनेटेशन इंजीनियरिंग विभाग से बीटेक की उपाधि प्राप्त की। वर्तमान में ये भारतीय प्रौद्योगिकी संस्थान (आईआईटी) दिल्ली में एम्प्ल कर रहे हैं। इंटेल कॉर्पोरेशन एक अमेरिकी बहुराष्ट्रीय कंपनी है। सिलिकॉन वैली में सांता क्लायरिंग द्वारा इस कंपनी का भारत में मुख्यालय बिलासपुर है।

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# MATHEMATICS - 10TH

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### POLYNOMIAL

1	2	3	4	5	6	7	8
A	C	B	A	D	C	B	B
9	10	11	12	13	14	15	16
A	B	A	D	B	C	B	A
17	18	19	20	21	22	23	24
D	B	C	D	B	C	C	B
25	26	27	28	29	30	31	32
B	B	B	D	A	A	A	B
33	34	35	36	37	38	39	40
C	A	B	-	-	-	-	-
41	42	43	44	45	46	47	48
-	-	-	-	-	-	-	-