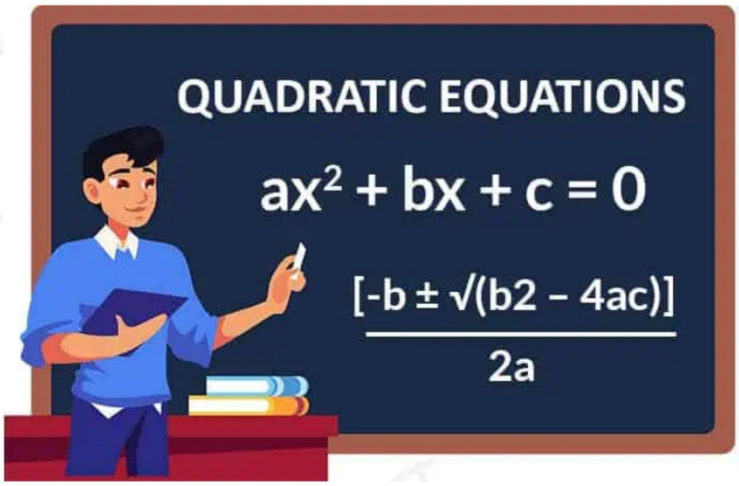
MATHEMATICS - 10TH

IMPORTANT MCQ'S – MATHS (10TH GRADE)



QUADRATIC EQUATIONS

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Material Curated by
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Ex. Scientist , BARC Mumbai

10th - Maths

SN		Marks
1	According to Shridharacharya formula , the roots of ax^2+bx+c are given by - (a) $\alpha=\frac{-b+\sqrt{D}}{2a}$ (b) $\beta=\frac{-b-\sqrt{D}}{2a}$ (c) BOTH A and B (d) NONE OF THE ABOVE	1
2	Which of the following is a quadratic equation? (a) $x^2-3\sqrt{x}+2=0$ (b) $x+\frac{1}{x}=x^2$ (c) $x^2+\frac{1}{x^2}=5$ (d) $2x^2-5x=(x-1)^2$	1
3	Which of the following is not a quadratic equation? (a) $3x-x^2=x^2+5$ (b) $(x+2)^2=2(x^2-5)$ (c) $(\sqrt{2}x+3)^2=2x^2+6$ (d) $(x+1)^2=3x^2+x-2$	1
4	Is the following a quadratic equation? $x^2+2x+1=(4-x)^2+3$ (a) YES (b) NO	1
5	Is the following a quadratic equation? $2x-x^2=x^2+5$ (a) YES (b) NO	1
6	Check whether the following is a quadratic equation: $x(2x+3)=x^2+1$ (a) YES (b) NO	1
7	Represent the following situation in the form of quadratic equations: The product of two consecutive positive integers is 306. We need to find the integers. (a) $x^2+x-30=0$ (b) $4x^2+5x-306=0$ (c) $2x^2-7x+306=0$ (d) $x^2+x-306=0$	1
8	Represent the following situation in the form of quadratic equations: Rohan's mother is 26 years older than him. The product of their ages (in years) 3 years from now will be 360. We would like to find Rohan's present age.	1

	(a) $x^2 + 2x - 27 = 0$ (b) $x^2 + 3x = 0$ (c) $x^2 + 32x - 273 = 0$ (d) $2x^2 + 7x - 23 = 0$	
9	State true or false: Every quadratic equation has at least two roots. (a) TRUE (b) FALSE	1
10	State true or false: Every quadratic equation has at most two roots. (a) TRUE (b) FALSE	1
11	Find the values of k so that the quadratic equation $x^2 - 4kx + k = 0$ has equal roots. (a) k = 1 or $k = \frac{1}{3}$ (b) k = 2 or $k = \frac{1}{2}$ (c) k = 0 or $k = \frac{1}{4}$ (d) NONE OF THESE	1
12	Find the values of k for which the quadratic equation $9x^2 - 3kx + k = 0$ has equal roots. (a) k = 0 or k = 4 (b) k = 0 or k = 2 (c) k = 0 or k = 3 (d) NONE OF THESE	1
13	Does the following equation has 2 as a root? $x^2 - 4x + 5 = 0$ (a) YES (b) NO	1
14	The quadratic equation $x^2 - 6x - 16 = 0$ has sum of roots equal to 6 and product of roots equal to _____ (a) 16 (b) -16 (c) 22 (d) None of these	1

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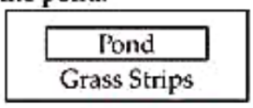
15	**The quadratic equation $2x^2-\sqrt{5}x+1=0$ has** (a) Two distinct real roots (b) Two equal real roots (c) No real roots (d) More than 2 real roots	1
16	The value of 'p' for which $3x^2-5x+p=0$ has equal roots is_____. (a) $\frac{25}{12}$ (b) $\frac{5}{12}$ (c) None of these	1
17	The product of two consecutive positive integers is 306. Form the quadratic equation to find the integers, if x denotes the smaller integer. (a) $x^2-x+306=0$ (b) $x^2+x+306=0$ (c) $x^2+x-306=0$ (d) $x^2-x-306=0$	1
18	Find the values of k for which the quadratic equation $2x^2+kx+3=0$ has two real equal roots. (a) $\pm 2\sqrt{5}$ (b) $\pm 2\sqrt{3}$ (c) $\pm 3\sqrt{6}$ (d) $\pm 2\sqrt{6}$	1
19	Find the values of k for which the given equation $kx^2-6x-2=0$ has real roots (a) $k \geq \frac{-9}{2}$ (b) $k \leq \frac{1}{3}$ (c) $k \geq 4$ or $k \leq -4$ (d) NONE OF THE ABOVE	1
20	Find the nature of the roots of the following quadratic equation $2x^2-8x+5=0$ (a) Real and unequal (b) Real and equal (c) Not real (d) NONE OF THE ABOVE	1
21	Find the nature of the roots of the following quadratic equation $3x^2-2\sqrt{6}x+2=0$ (a) Real and unequal (b) Real and equal (c) Not real (d) NONE OF THE ABOVE	1
22	Find the nature of the roots of the following quadratic equation $12x^2-4\sqrt{15}x+5=0$	1

	(a) Real and unequal (b) Real and equal (c) Not real (d) NONE OF THE ABOVE	
23	Find the nature of the roots of the following quadratic equation $x^2 - x + 2 = 0$ (a) Real and unequal (b) Real and equal (c) Not real (d) NONE OF THE ABOVE	1
24	If the sum of two natural numbers is 27 and their product is 182, find the numbers. (a) 13 & 14 (b) 15 & 16 (c) 17 & 14 (d) NONE OF THE ABOVE	1
25	The sum of the squares of two consecutive multiples of 7 is 637. Find the multiples. (a) 14 & 19 (b) 14 & 21 (c) 21 & 16 (d) NONE OF THE ABOVE	1
26	A person on tour has rupees 4200 for his expenses. If he extends his tour for 3 days, he has to cut down his daily expenses by rupees 70. Find the original duration of the tour. (in days) (a) 11 (b) 12 (c) 13 (d) 14	1
27	The sum of the ages of a man and his son is 45 years. Five years ago, the product of their ages (in years) was 124. Find their present ages. (a) Man's present age = 37 years, Son's present age = 19 years. (b) Man's present age = 36 years, Son's present age = 9 years. (c) Man's present age = 56 years, Son's (d) Man's present age = 36 years, Son's	1

	present age = 9 years. present age = 19 years.	
28	If a man walks 1 km/hr faster than his usual speed then he covers a distance of 3 km in 15 minutes less time. Find his usual speed. (a) 3 km/hr (b) 4 km/hr (c) 5 km/hr (d) 6 km/hr	1
29	The product of two consecutive positive integers is 306. Find the integers. (a) 16 and 14 (b) 15 and 17 (c) 14 and 16 (d) 17 and 18	1
30	**In a rectangular part of dimensions 50 m× 40 m a rectangular pond is constructed so that the area of grass strip of uniform breadth surrounding the pond would be 1184 m^2. Find the length and breadth of the pond.**  (a) 34 m, 24 m (b) 44 m, 33 m (c) None of these	1

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सीयू के छात्र मनु व मनीष का इंटेल कंपनी में चयन, 21 लाख सालाना पैकेज

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 कम्युनिकेशन इंजीनियरिंग विभाग से बीटेक की उपाधि प्राप्त की। वर्तमान में ये भारतीय प्रौद्योगिकी संस्थान (आईआईटी) दिल्ली में एमटेक कर रहे हैं। इंटेल कॉरपोरेशन एक अमेरिकी बहुराष्ट्रीय कंपनी है। सिलिकॉन वैली में सांता क्लारा स्थित इस कंपनी का भारत में मुख्यालय बेंगलुरु है।

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MATHEMATICS - 10TH

IMPORTANT MCQ'S – MATHS (10TH GRADE)

QUARDRATIC EQUATION

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