Pravinya Polycet Practice Paper - 5

Question **1**
Not answered
Marked out of 1.00

Find roots of given equation (2x + 3) (3x - 2) = 0 using Factorization method ?

- a. (-3/2, 2/3)
- b. (3/4, -3/2)
- c. (1/4, -2/3)
- d. (4/5, -4/3)

The correct answer is: (-3/2, 2/3)

Question **2**
Not answered
Marked out of 1.00

Given Quadratic equation $x^2 + x + 15 = 0$, Find Nature of roots ?

- a. Real and unequal
- b. Real and equal
- c. Imaginary
- d. None of these

The correct answer is: Imaginary

Question **3**
Not answered
Marked out of 1.00

Which of the following equation is a Quadratic equation ?

- a. $x^2 - 2x + 3$
- b. (x - 2) = 5
- c. x - 3 = 2x
- d. 4x - 5 = 5y - 4

The correct answer is: $x^2 - 2x + 3$

Question **4**

Not answered

Marked out of 1.00

Given $10x^2 + 23x + 12$ find the roots using Factorization method ?

- a. (-4/5, -3/2)
- b. (5/4, 3/2)
- c. (3/2, -4/5)
- d. (1/4, 5/6)

The correct answer is: (-4/5, -3/2)

Question **5**

Not answered

Marked out of 1.00

$3x^2 + 6x + 1 = 0$ is a quadratic equation, find Nature of roots ?

- a. Rational and unequal
- b. Real and equal
- c. Imaginary
- d. Rational and unequal

The correct answer is: Rational and unequal

Question **6**

Not answered

Marked out of 1.00

Given $5x^2 - 4x + 2 = 0$ is quadratic equation, then Nature of roots is ?

- a. Real and unequal
- b. Real and equal
- c. Imaginary
- d. None of these

The correct answer is: Imaginary

Question **7**

Not answered

Marked out of 1.00

Find the Quadratic equation from the following ?

- a. $(3x - 2) + 1 = 4x - 7$
- b. $2x(7x + 5) = x^2 + 3$
- c. $x(x^2 + 3) - 3 = 2x$
- d. $x^3 - 4 = (x^2 - 4x + 2)$

The correct answer is: $2x(7x + 5) = x^2 + 3$

Question **8**

Not answered

Marked out of 1.00

Find the roots of the quadratic equation (2x + 5)(3x + 4) = 0.

- a. -5/2, -4/3
- b. 1/2, 4/2
- c. 2/3, 5/3
- d. 3/4, 4/3

The correct answer is: -5/2, -4/3

Question **9**

Not answered

Marked out of 1.00

Given $3x^2 - \sqrt{7}x + 1 = 0$ quadratic equation, find the Nature of roots ?

- a. Real and Distinct
- b. Real and equal
- c. Imaginary
- d. None of these

The correct answer is: Imaginary

Question **10**

Not answered

Marked out of 1.00

If roots of quadratic equation $14x^2 + 59x + k$ are -5/7 and -7/2, then find the 'k' value ?

- a. 30
- b. 35
- c. 40
- d. 45

The correct answer is: 35

Question **11**

Not answered

Marked out of 1.00

Find the roots of $x^2 - 2x - 15 = 0$ using Factorization method ?

- a. (5, 3)
- b. (5, -3)
- c. (4, 5)
- d. (-4, 5)

The correct answer is: (5, -3)

Question **12**

Not answered

Marked out of 1.00

x(x + 9) = -20 is a quadratic equation, then roots are ?

- a. (5, 3)
- b. (-5, -4)
- c. (6, 7)
- d. (3, 5)

The correct answer is: (-5, -4)

Question **13**

Not answered

Marked out of 1.00

x + (2/x) = 3, Find the roots for the given quadratic equation ?

- a. 1, -2
- b. 1, 2
- c. 2, 5
- d. 3, 4

The correct answer is: 1, 2

Question **14**

Not answered

Marked out of 1.00

Find the roots of the quadratic equation $3x^2 + 11 = -10$.

- a. -2, -5/3
- b. 5/3, 4
- c. 3, 4/5
- d. 2, -5/3

The correct answer is: -2, -5/3

Question **15**

Not answered

Marked out of 1.00

Given quadratic equation $x^2 - 19x + 90 = 0$, find root using Factorization method ?

- a. (9, 10)
- b. (8, 9)
- c. (7, 6)
- d. (4, 7)

The correct answer is: (9, 10)

Question **16**

Not answered

Marked out of 1.00

Find the roots of $2x^2 - 227x + 4095 = 0$ by using the factorization method ?

- a. (91, 45/2)
- b. (-91, 45/2)
- c. (-45/2, 91)
- d. (45, 91)

The correct answer is: (91, 45/2)

Question **17**

Not answered

Marked out of 1.00

Find the Nature of roots for the given equation $4x^2 - 4x + 1 = 0$?

- a. Real roots
- b. Imaginary roots
- c. Real and Distinct roots
- d. None of these

The correct answer is: Real roots

Question **18**

Not answered

Marked out of 1.00

Which of the following are the roots of the quadratic equation, $x^2 - 9x + 20 = 0$ by factorisation?

- a. 3, 4
- b. 4, 5
- c. 5, 6
- d. 6, 1

The correct answer is: 4, 5

Question **19**

Not answered

Marked out of 1.00

If the roots of $ax^2 + bx + c = 0$ are in the ratio m : n, then_____.

- a. $mna^2 = (m + n)\, c^2$
- b. $mnb^2 = (m + n)\, ac$
- c. $mn\, b^2 = (m + n)^2\, ac$
- d. $mnb^2 = (m - n)^2\, ac$

The correct answer is: $mn\, b^2 = (m + n)^2\, ac$

Question **20**

Not answered

Marked out of 1.00

Find roots of given equation (15x + 8) (18x - 9) = 0 by using the factorization method ?

a. (-8/15, 18/9)

b. (15/8, 9/8)

c. (-8/15, 9/18)

d. (9/18, 15/8)

The correct answer is: (-8/15, 9/18)

Question **21**

Not answered

Marked out of 1.00

Find the quadratic equation from the following ?

a. 32y + 53x - 10 = 0

b. $2x (17x + 5) = 13x^2 + 31$

c. $y (x^2 + 3) - 3 = 2x$

d. $x^5 - x^4 = (x^3 - 4x^2 + 2x + 3)$

The correct answer is: $2x (17x + 5) = 13x^2 + 31$

Question **22**

Not answered

Marked out of 1.00

If (1 – p) is a root of the equation $x^2 + px + 1 - p = 0$, then roots are_____.

a. 0, 1

b. -1, 1

c. 0, -1

d. -1, 2

The correct answer is: 0, -1

Question **23**

Not answered

Marked out of 1.00

By using factorization method, find the roots of $x^2 + 2x - 323 = 0$?

a. (17, 19)

b. (17, -19)

c. (17, 15)

d. (15, -17)

The correct answer is: (17, -19)

Question **24**
Not answered
Marked out of 1.00

Given $5x^2 + 90 = 0$, then the Nature of roots are?

- a. Real and equal
- b. Real and unequal
- c. Real roots
- d. Imaginary roots.

The correct answer is: Imaginary roots.

Question **25**
Not answered
Marked out of 1.00

The equation $(x - 2)^2 + 1 = 2x - 3$ is a_____.

- a. Linear equation
- b. Quadratic equation
- c. Cubic equation
- d. Bi-quadratic equation

The correct answer is: Quadratic equation

Question **26**
Not answered
Marked out of 1.00

100x (x-1) = 56, given quadratic equation, find the roots ?

- a. 7/5, -8/20
- b. 8/20, 5/7
- c. 8, 7/5
- d. 8/20, -8

The correct answer is: 7/5, -8/20

Question **27**
Not answered
Marked out of 1.00

Maximum number of roots of a quadratic equation are_____.

- a. One
- b. Two
- c. Three
- d. Four

The correct answer is: Two

Question **28**
Not answered
Marked out of 1.00

Given equation $x^2 + 4x + 5 = 0$, find the Nature of roots ?

- a. Imaginary roots
- b. Real roots
- c. Rational
- d. Irrational

The correct answer is: Imaginary roots

Question **29**
Not answered
Marked out of 1.00

Given quadratic equation $2x^2 - 91x + 1035$, find the roots by using the factorization method ?

- a. (23, 45/2)
- b. (23, 45)
- c. (45, 23/2)
- d. (17, 23)

The correct answer is: (23, 45/2)

Question **30**
Not answered
Marked out of 1.00

Find roots of given equation $(29x - 3)(41x + 3) = 0$ using factorization method ?

- a. (29, 41)
- b. (3/29, -3/41)
- c. (41, -3)
- d. (41, 39)

The correct answer is: (3/29, -3/41)

Question **31**
Not answered
Marked out of 1.00

The roots of the quadratic equation $6x^2 – x – 2 = 0$ are_____.

- a. 2/3, -1/2
- b. 3/2, 1/2
- c. 1/2, -3/2
- d. 1/2, 1/2

The correct answer is: 2/3, -1/2

Question **32**
Not answered
Marked out of 1.00

Find the roots of $2(x^2 + 5) = 12x$?

- a. 5, 1
- b. -5, 2
- c. 10/2, 5
- d. -10/2, 3

The correct answer is: 5, 1

Question **33**
Not answered
Marked out of 1.00

If a > 0, then the function $f(x) = ax^2 + bx + c$ has _____.

- a. Maximum value
- b. Minimum value
- c. Constant value
- d. Positive value

The correct answer is: Maximum value

Question **34**
Not answered
Marked out of 1.00

Given equation (43x + 8) (7x - 90) = 0, find the roots by using the factorization method ?

- a. (-90/7, 8/42)
- b. (43/8, 90)
- c. (-8/43, 90/7)
- d. (43, 90)

The correct answer is: (-8/43, 90/7)

Question **35**
Not answered
Marked out of 1.00

Given equation x^2-6x+9, find the nature of roots and also the roots ?

- a. (3, -3), Real and unequal roots
- b. (3, 3), Real and equal roots
- c. (4, 5), Real and distinct roots
- d. (2, 4), Imaginary roots

The correct answer is: (3, 3), Real and equal roots

Question **36**
Not answered
Marked out of 1.00

Find the roots of given equation $3x^2 - 10x + 3 = 0$?

- a. (3, 1/3)
- b. (-3, 1/3)
- c. (4, -5)
- d. (-5, 7)

The correct answer is: (3, 1/3)

Question **37**
Not answered
Marked out of 1.00

Find the roots of the following function and also their nature of roots, $p(x) = x^2$?

- a. (0, 0), real roots
- b. (1, 0), distinct roots
- c. (1, 2), real and unequal roots
- d. (-4, 5), imaginary roots

The correct answer is: (0, 0), real roots

Question **38**
Not answered
Marked out of 1.00

Which of the following equation is a quadratic equation ?

- a. $x^3 - 5x^2 + 3x - 5$
- b. $x^2 - 3x + 7$
- c. $5x - 2x = 9$
- d. $55y = 88x - 6$

The correct answer is: $x^2 - 3x + 7$

Question **39**
Not answered
Marked out of 1.00

The sum of the squares of two consecutive natural numbers is 313. The numbers are?

- a. 12, 13
- b. 13,14
- c. 11,12
- d. 14,15

The correct answer is: 12, 13

Question **40**
Not answered
Marked out of 1.00

Find the Nature of roots for given equation $x^2 - 2x + 3$?

- a. Real roots
- b. Imaginary roots
- c. Irrational
- d. Rational

The correct answer is: Imaginary roots

Question **41**
Not answered
Marked out of 1.00

If the roots of $px^2 + qx + 2 = 0$ are reciprocal of each other, then____.

- a. P = 0
- b. P = -2
- c. P = ±2
- d. P = 2

The correct answer is: P = 2

Question **42**
Not answered
Marked out of 1.00

Find the roots of equation $2x^2 - 8x - 4 = 0$?

- a. (2+√6 ,2-√6)
- b. (2, 2+√5)
- c. (3+√2, 3-√2)
- d. (5, -√6)

The correct answer is: (2+√6 ,2-√6)

Question **43**
Not answered
Marked out of 1.00

The roots of the equation $(b - c)\,x^2 + (c - a)\,x + (a - b) = 0$ are equal, then_____.

- a. 2a = b + c
- b. 2c = a + b
- c. b = a + c
- d. 2b = a + c

The correct answer is: 2b = a + c

Question **44**

Not answered

Marked out of 1.00

Given that the equation $2x^2 - kx + 2 = 0$ has equal roots. Find the value of the constant 'k' ?

- a. -4, 4
- b. 3, -3
- c. 2, -4
- d. 1, 0

The correct answer is: -4, 4

Question **45**

Not answered

Marked out of 1.00

The polynomial equation x (x + 1) + 8 = (x + 2) {x – 2) is_____.

- a. Linear equation
- b. Quadratic equation
- c. Cubic equation
- d. Bi-quadratic equation

The correct answer is: Linear equation

Question **46**

Not answered

Marked out of 1.00

Find the roots of the quadratic equation $6x^2 – x – 2 = 0$

- a. 2/3, -1/2
- b. -2/3, 1/2
- c. -1/2, 3/2
- d. 3/2, -1/2

The correct answer is: 2/3, -1/2

Question **47**

Not answered

Marked out of 1.00

The roots of the equation $(b – c) x^2 + (c – a) x + (a – b) = 0$ are equal, then

- a. 2a = b + c
- b. 2c = a + b
- c. b = a + c
- d. 2b = a + c

The correct answer is: 2b = a + c

Question **48**

Not answered

Marked out of 1.00

Which of the following is not a quadratic equation?

a. $2(x-1)^2 = 4x^2 - 2x + 1$

b. $2x - x^2 = x^2 + 5$

c. $(\sqrt{2}x + \sqrt{3})^2 + x^2 = 3x^2 - 5x$

d. $(x^2 + 2x)^2 = x4 + 3 + 4x3$

The correct answer is: $(\sqrt{2}x + \sqrt{3})^2 + x^2 = 3x^2 - 5x$

Question **49**

Not answered

Marked out of 1.00

Find the discriminant of the equation $3x^2 - 2x + 13 = 0$ and hence find the nature of its roots. Find them, if they are real.

a. 1/2, 1/3

b. 1/3, 1/3

c. 1/2, 1/2

d. 2/3, 3/2

The correct answer is: 1/3, 1/3

Question **50**

Not answered

Marked out of 1.00

The equation $12x^2 + 4kx + 3 = 0$ has real and equal roots, if_____.

a. $k = \pm 3$

b. $k = \pm 9$

c. $k = 4$

d. $k = \pm 2$

The correct answer is: $k = \pm 3$

Question **51**

Not answered

Marked out of 1.00

A chess board contains 64 equal squares and the area of each square is 6.25 cm^2. A border round the board is 2 cm wide. The length of the side of the chess board is?

a. 8 cm

b. 12 cm

c. 24 cm

d. 36 cm

The correct answer is: 24 cm

Question **52**

Not answered

Marked out of 1.00

Satheesh and Suresh solve an equation. In solving Satheesh commits a mistake in constant term and finds the roots 8 and 2. Suresh commits a mistake in the coefficient of x. The correct roots are?

- a. 9,1
- b. -9,1
- c. 9, -1
- d. -9, -1

The correct answer is: 9,1

Question **53**

Not answered

Marked out of 1.00

$(x^2 + 1)^2 - x^2 = 0$ has _____.

- a. Four real roots
- b. Two real roots
- c. No real roots
- d. One real root

The correct answer is: No real roots

Question **54**

Not answered

Marked out of 1.00