# MATHS

# BOOKS - KC SINHA MATHS (HINGLISH)

# QUADRATIC EQUATIONS - FOR BOARDS

Solved Examples

1. Solve the following equation by fasctorization method: $9x^2 + 16 = 0$

**2.** Solve the equation $x^2 + 2x + 10 = 0$ factorization method,

**3.** Solve the following equation by using the general expressions for roots of as quadratic equation: $x^2 - 5x + 6 = 0$

**4.** Solve the following equation by using the general expressions for roots of as quadratic equation: $x^2 - 14x + 58 = 0$

**5.** Solve the following equations by factorization method: $x^2 - ix + 6 = 0$

**6.** Solve the following equations by factorization method: $x^2 + 8ix - 16 = 0$

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**7.** Solve the following equation by factorization method:

$x^2 \left(3\sqrt{2} + 2i\right)x + 6\sqrt{2}i = 0$

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**8.** Solve the equation $2x^2 + 3ix + 2 = 0$ using the general expression for a quadratic equation.

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**9.** Solve the Equation $x^2 + \left(\sqrt{3} - 2\sqrt{2}i\right)x - 2\sqrt{6}i = 0$ using the general epression for a quadratic equation.

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**1.** Solve the equation by factorizatiion method:

$$2x^2 + 3 = 0$$

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**2.** Solve the equation by factorizatiion method:

$$x^2 + x + 1 = 0$$

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**3.** Solve the equation by factorizatiion method:

$$x^2 + 2x + 5 = 0$$

**4.** Solve the equation by factorizatiion method: $x^2 - 4x + 7 = 0$

**5.** Solve the equation by factorizatiion method:

$$x^2 - 4x + 13 = 0$$

**6.** Solve the equation $9x^2 - 12x + 20 = 0$ by factorization method only.

**7.** Solve the equation by using the general expression for roots of a quadratic equation:

$2x^2 - \sqrt{3}x + 1 = 0$

**8.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 - 8x + 1 = 0$$

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**9.** Solve the equation by using the general expression for roots of a quadratic equation:

$$5x^2 - 6x + 2 = 0$$

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**10.** Solve the equation by using the general expression for roots of a quadratic equation:

$$3x^2 - 7x + 5 = 0$$

**11.** Solve the equation by using the general expression for roots of a quadratic equation:

$$8x^2 - 9x + 3 = 0$$

**12.** Solve the equation by using the general expression for roots of a quadratic equation:

$$9x^2 + 4 = 0$$

**13.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 - x + 1 = 0$$

**14.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 - 4x + 7 = 0$$

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**15.** Solve the equation by using the general expression for roots of a quadratic equation:

$$27x^2 + 10x + 1 = 0$$

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**16.** Solve the equation by using the general expression for roots of a quadratic equation:
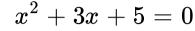
$x^2 + 2x + 2 = 0$

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**17.** Solve the equation by using the general expression for roots of a quadratic equation:

$x^2 + x + 1 = 0$

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**18.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 + 3x + 9 = 0$$

**19.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 + 3 = 0$$

**20.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 + 3x + 5 = 0$$

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**21.** Solve the equation by using the general expression for roots of a quadratic equation:

$$27x^2 + 10x + 1 = 0$$

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**22.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 - x + 1 = 0$$

**23.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 + 2 = 0$$

**24.** Solve the equation by using the general expression for roots of a quadratic equation:

$$21x^2 - 28x + 10 = 0$$

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**25.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 + x + 2 = 0$$

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**26.** Solve the equation by using the general expression for roots of a quadratic equation:

$$-x^2 + x - 2 = 0$$

**27.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 - 2x + \frac{3}{2} = 0$$

**28.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 + \frac{x}{\sqrt{2}} + 1 = 0$$

**29.** Solve the equation by using the general expression for roots of a quadratic equation:

$$3x^2 - 4x + \frac{20}{3} = 0$$

**30.** Solve the equation by using the general expression for roots of a quadratic equation:

$$x^2 + x + \frac{1}{\sqrt{2}} = 0$$

**31.** Solve the equation by using the general expression for roots of a quadratic equation:

$$\sqrt{5}x^2 + x + \sqrt{5} = 0$$

**32.** Solve the equation by using the general expression for roots of a quadratic equation:

$$\sqrt{3}x^2 - \sqrt{2}x + 3\sqrt{3} = 0$$

**33.** Solve the following equations by factorization method: $x^2 - 5ix - 6 = 0$

**34.** Solve the following equations by factorization method: $3x^2 + 7ix + 6 = 0$

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**35.** Solve the following quadratic equation by factorization method:

$$x^2 + (1 - 2i)x - 2i = 0$$

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**36.** Solve the following quadratic equation by factorization method:

$$x^2 - \left(2\sqrt{3} + 3i\right)x + 6\sqrt{3}i = 0$$

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**37.** Solve the following equations by using the general expression for a quadratic equation:

$$x^2 + 4ix - 4 = 0$$

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**38.** Solve the following quadratic equations by using he general expressions for the roots of a quadratic equation:

$$x^2 - \left(3\sqrt{2} - 2i\right)x - 6\sqrt{2}i = 0$$

$$2x^2 + 3ix + 2 = 0$$

**39.** Solve the following equations by using the general expression for a quadratic equation:

$$x^2 - (5 - i)x + (18 + i) = 0$$

**40.** Solve the following equations by using the general expression for a quadratic equation:

$$x^2 - (7 - i)x + (18 - i) = 0$$

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**41.** Solve the following equations by using the general expression for a quadratic equation:

$$ix^2 - 4x - 4i = 0$$

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**42.** Solve the following equations by using the general expression for a quadratic equation:

$$x^2 - 7ix - 12 = 0$$