

(More About Equations)

August 28, 2023

Answer the questions in the spaces provided on the question sheets. If you do not know how to answer a certain question, write down where you get stuck. Answers can be corrected to 3 significant figures if necessary.

Tutor's name: _____

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This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire width, providing a template for writing or drawing. The margins are consistent on all sides.

3. Solve $x^2 - 2x - 2 > 0$ by using **compound inequalities**

4. Solve $x^2 + 3x - 10 > 0$ by using the **tabulation method**.

(a) $x^2 - 8x + 20 < 0$

(b) $-x^2 + 10x - 28 \leq 0$

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]

7. Find the range of values of k if quadratic equation in x : $x^2 + kx + (k^2 - 3) = 0$ has

(a) two distinct real roots

(b) no real roots

[illegible]

8. If $x^2 - (2k + 1)x + 2k + 1$ is always positive for all real values of x , find the range of values of k .

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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- This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

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- This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on its right side, suggesting it's resting on a surface.

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