

MATH 5.1ER Quiz 2
(Inequalities in One Unknown)
Time Limit: (50 minutes)

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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.

Name, class, class no.: _____

Tutor's name: _____

1. (4 marks) If the quadratic curve $y = x^2 + kx + 8$ intersects the straight line $y = 4x - 1$ at two distinct points, find the range of possible values of k .

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- 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 or other markings on the paper.

5. Given $x^2 - 2(1+a)x + (3a^2 + 4ab + 4b^2 + 2) = 0$, where a and b are real.

(a) Show that the discriminant of the equation is $-4[(a-1)^2 + (a-2b)^2]$

(b) Find a and b if the equation has equal real roots.

[illegible]