1. Linear inequalities

1. Find without using a calculator, the value of :

$$\frac{12\sqrt{0.0625} - 12.4 \div 0.4 \times 3}{\frac{1}{8} \text{ of } 2.56 + 8.68}$$

2. Solve and write down all the integral values satisfying the inequality.
   $X - 9 \leq -4 < 3x - 4$

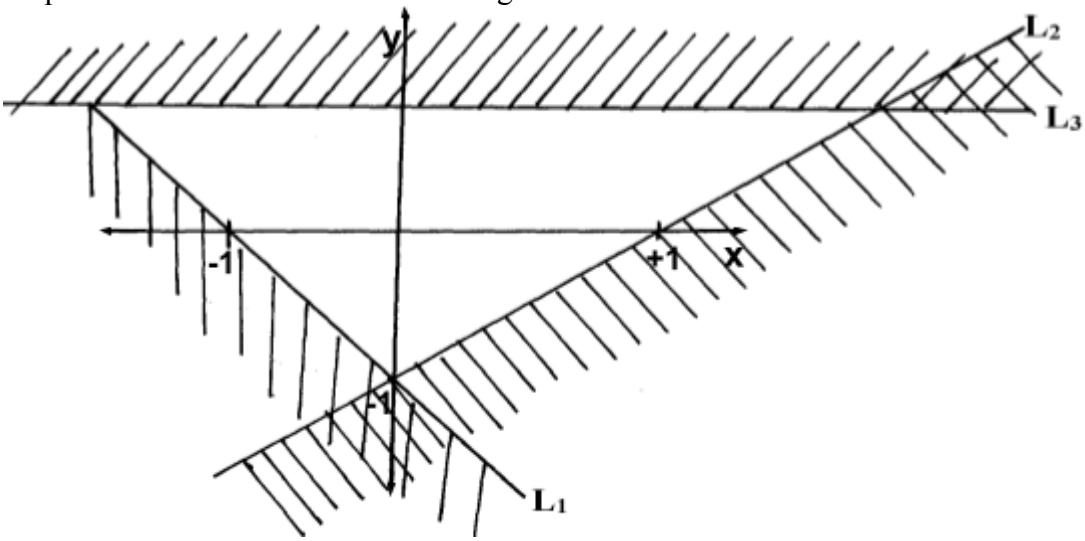
3. Solve the inequality and show the solution on the number line.
   $3 - 2x \angle x \angle 2x + 5$

4. Show on a number line the range of all integral values of $\boldsymbol{x}$ which satisfy the following pair of inequalities: $3 - \boldsymbol{x} \leq 1 - \frac{1}{2}\boldsymbol{x}$
   $-\frac{1}{2}(\boldsymbol{x}-5) \leq 7-\boldsymbol{x}$

5. Solve the inequalities $\mathbf{4x - 3 \leq 6x - 1 < 3x + 8}$; hence represent your solution on a number line

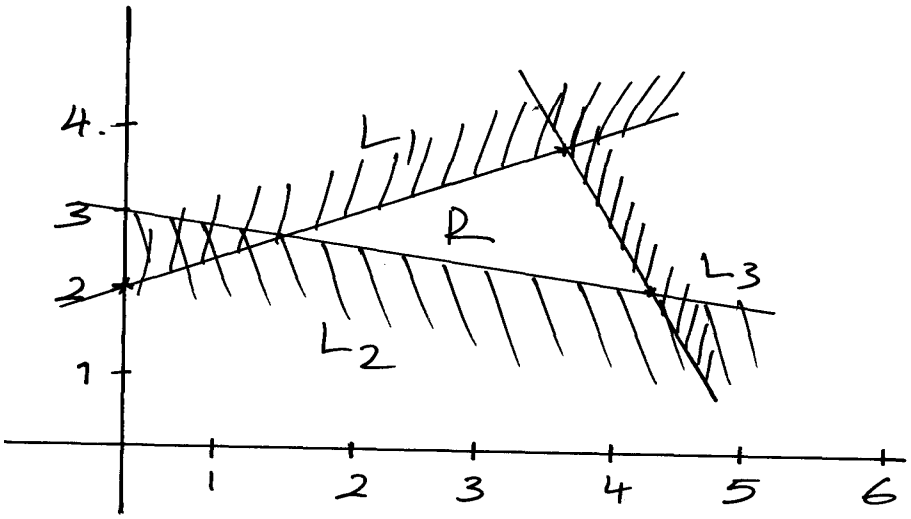
6. Find all the integral values of **x** which satisfy the inequalities
   $2(2-x) < 4x - 9 < x + 11$

7. Find the inequalities that define the unshaded region



8. Given that $x + y = 8$ and $x^2 + y^2 = 34$
   Find the value of:- a) $x^2+2xy+y^2$
   b) $2xy$

9. Find the inequalities satisfied by the region labelled **R**



10. The region R is defined by $x \geq 0$, $y \geq -2$, $2y + x \leq 2$. By drawing suitable straight line on a sketch, show and label the region R

11. Find all the integral values of $\boldsymbol{x}$ which satisfy the inequality
$3(1+x) < 5x - 11 < x + 45$

12. The vertices of the unshaded region in the figure below are O(0, 0) , B(8, 8) and A (8, 0). Write down the inequalities which satisfy the unshaded region

