1. Linear inequalities

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

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

2. Solve and write down all the integral values satisfying the inequality.

$$X - 9 \le -4 < 3x - 4$$

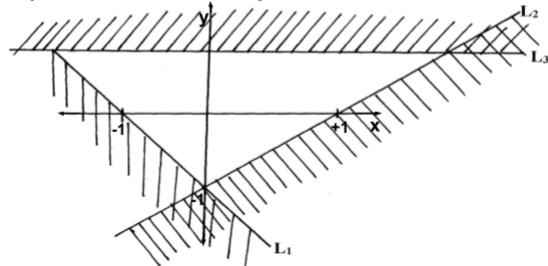
3. Solve the inequality and show the solution on the number line.

$$3-2x \angle x \underline{\angle} 2x+5$$

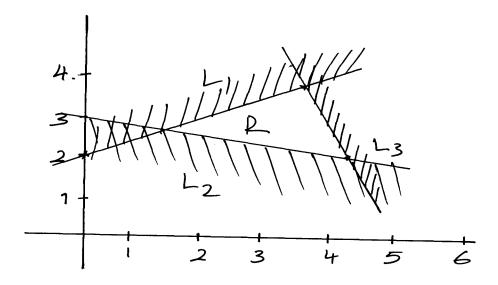
4. Show on a number line the range of all integral values of x which satisfy the following pair of inequalities: $3 - x \le 1 - \frac{1}{2}x$

$$-\frac{1}{2}(x-5) \le 7-x$$

- 5. Solve the inequalities $4x 3 \le 6x 1 < 3x + 8$; 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 $x \ge 0$, $y \ge -2$, $2y + x \le 2$. By drawing suitable straight line on a sketch, show and label the region R
- 11. Find all the integral values of 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

