



3. (a) On the same set of axes, shade the regions which satisfy the inequalities

$$x + y \geq 3 \quad \text{and} \quad x + y \leq 5$$

Which inequality is satisfied by the region shaded twice?

- (b) Shade the region which satisfies the inequality $2 \leq x - y \leq 4$.
4. (a) Draw the graph of $y = x^2$ and shade the region which satisfies the inequality $y \leq x^2$.
- (b) On the same set of axes, draw the graphs of

$$y = x^2 + 1 \quad \text{and} \quad y = x^2 - 1$$

Shade the region which satisfies the inequality, $x^2 - 1 < y < x^2 + 1$.