



Algebra 1

Topic: Graphing Linear Inequalities in Two Variables

Instructions

Graph each inequality on a coordinate plane. Show all your work, including the boundary line, shading, and test points.

Practice Problems

1. Graph the following inequalities in a coordinate plane:

(i) $y \leq 4$

(iv) $x \geq -5$

(ii) $y > -2$

(v) $y > -8$

(iii) $x < 3$

(vi) $x < 6$

2. Graph the following linear inequalities:

(i) $y > 2x - 3$

(iv) $2x + y < 5$

(ii) $y \leq -\frac{1}{2}x + 4$

(v) $-3x + 2y \geq 6$

(iii) $y \geq \frac{3}{4}x - 2$

(vi) $3x - y \geq 5$

3. Tell whether the ordered pair is a solution of the inequality:

(i) $x + y < 7$; (2,3)

(iv) $-6x + 4y \leq 6$; (-3,-3)

(ii) $x - y \leq 0$; (5,2)

(v) $3x - 5y \geq 2$; (-1,-1)

(iii) $x + 3y \geq -2$; (-9,2)

(vi) $-x - 6y > 12$; (-8,2)

Multiple-Choice Questions

1. Which inequality represents the shaded region below the line $y = 2x + 1$?
A. $y > 2x + 1$
B. $y \geq 2x + 1$
C. $y < 2x + 1$
D. $y \leq 2x + 1$
2. What is the solution set for $y < \frac{1}{2}x + 3$?
A. Shaded above the line
B. Shaded below the line
C. No solution
D. Shaded on the line
3. If the boundary line of an inequality is dashed, which symbol must the inequality contain?
A. $\geq$
B. $\leq$
C. $>$ or $<$
D. None of the above
4. What is the boundary line for the inequality $3x - y \geq 6$?
A. Solid line, shaded above
B. Dashed line, shaded above
C. Solid line, shaded below
D. Dashed line, shaded below

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