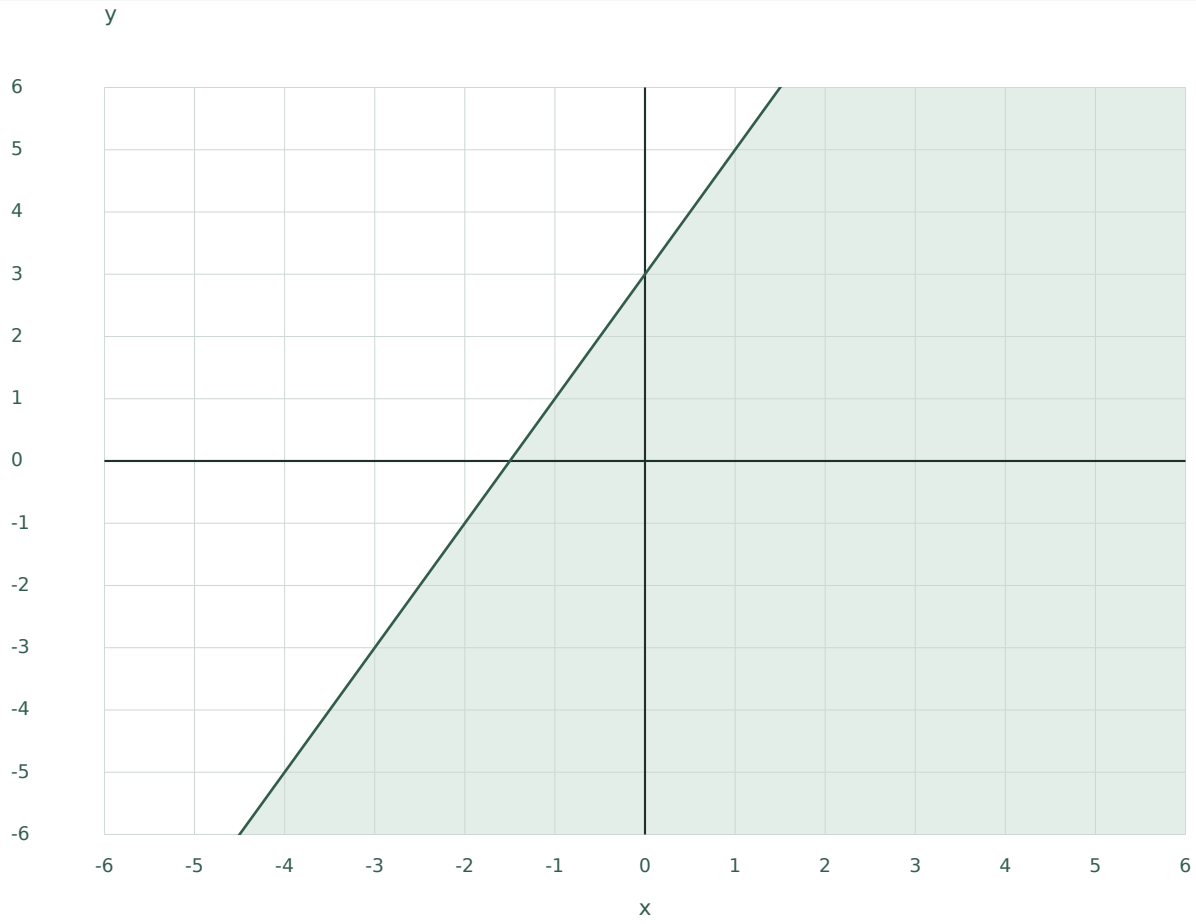
Graphing Inequalities Matching Activity: Pair Statements to Shaded Half-Planes

Worked graph



Given graph as described in the prompt. Decide whether its boundary style and shading match the separate inequality card.

Graphing Inequalities Matching Activity: Pair Statements to Shaded Half-Planes

Original worked example / unchanged complete key

Prompt: An inequality card reads $y \leq -2x + 3$. A pre-drawn graph shows a solid line with slope -2 and y-intercept 3, and the region below the line is shaded. Does the graph match the inequality? Explain using a test point.

Answer: Yes, the graph matches. The boundary line $y = -2x + 3$ has slope -2 and y-intercept 3, which agrees with the card. The symbol $\leq$ is non-strict, so the boundary should be solid, and it is. Test (0,0): $0 \leq -2(0) + 3$ gives $0 \leq 3$, which is true, so the origin side, which is below the line here, should be shaded. The graph shades below the line, so the match is correct.