



Slope Criteria for Lines

Today's Standard

HSG.GPE.B5 - Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).

Cues	Notes
What is the slope criteria for parallel lines?	Parallel lines have the same slope.
What is the slope criteria for perpendicular lines?	Perpendicular lines have slopes that are negative reciprocals.
How do you find the equation of a parallel line?	To find the equation of a parallel line, use the same slope and a different y-intercept.
How do you find the equation of a perpendicular line?	To find the equation of a perpendicular line, use the negative reciprocal of the given slope and pass through the given point.
What are common misconceptions about slopes?	Common misconceptions include thinking all lines with the same slope are the same line, and that perpendicular slopes only apply when intersecting at the origin.

Summary

Understanding the slope criteria for parallel and perpendicular lines helps solve geometric problems. Parallel lines share the same slope, while perpendicular lines have slopes that are negative reciprocals. Addressing common misconceptions is crucial for mastering these concepts.