



Partitioning Line Segments in Ratios

Today's Standard

HSG.GPE.B6 - Find the point on a directed line segment between two given points that partitions the segment in a given ratio.

Cues	Notes
What is the standard HSG.GPE.B6?	HSG.GPE.B6 involves finding a point on a line segment that divides it into a specific ratio.
How do you find a point that partitions a segment in a given ratio?	To find the point, use the formula for partitioning a segment: $(x_1 + k(x_2 - x_1), y_1 + k(y_2 - y_1))$, where k is the ratio.
What are common misconceptions about this standard?	Common misconceptions include misunderstanding the ratio application and confusing the order of points.
What is the prerequisite knowledge needed?	Students should understand coordinate geometry, plotting points, distances, and ratios.
What subsequent knowledge will be developed?	Mastery leads to understanding similar triangles and more complex geometric constructions.

Summary

HSG.GPE.B6 focuses on finding a point that partitions a line segment in a given ratio, requiring knowledge of coordinate geometry and ratios. Common misconceptions involve misapplying the ratio and confusing point order. Mastery prepares students for advanced geometric concepts.