Dilation and Parallel Lines

Today's Standard

HSG.SRT.A1a - A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.

Cues	Notes
What is a dilation?	A dilation is a transformation that produces an image that is the same shape as the original, but is a different size.
How does a dilation affect a line not passing through the center?	A dilation takes a line not passing through the center to a parallel line.
What happens to a line passing through the center of dilation?	A dilation leaves a line passing through the center unchanged.
Do dilations change angles?	Dilations do not change the angles of a shape; they only change the lengths of the sides proportionally.
Real-world applications of dilations	Examples include scaling maps, modeling in architecture, and understanding lens magnification.

Summary

Dilations are geometric transformations that change the size but not the shape of an object. They affect lines differently based on whether the line passes through the center of dilation, and they preserve angles.