Deriving Parabola Equations

Today's Standard

HSG.GPE.A2 - Derive the equation of a parabola given a focus and directrix.

Real-World Applications for this Standard

Satellite dish design; Reflective properties in headlights; Architectural structures; Projectile motion in physics; Optical systems in telescopes

Today I Learned

Today, we learned how to find the equation of a curved line called a parabola using a point and a line.

Common Stumbling Blocks

Some kids might think that the special point and line can be swapped, but they can't. Others might think the curved line always starts at zero, but it can start anywhere.

Quiz Me

- What is a parabola?
- What is a focus?
- What is a directrix?
- Can the vertex be anywhere?
- Where do we see parabolas in real life?

Help Me

A parabola is a special curved line that we can see in satellite dishes and car headlights. We find its equation using a special point and a line. This helps us understand and use parabolas in the real world.