



Apply the Geometry of Conic Sections in Solving Problems

Achieved	Merit	Excellence
Apply conics methods in solving problems.	Apply conics methods, using <u>relational thinking</u> , in solving problems.	Apply conics methods, using <u>extended abstract thinking</u> , in solving problems.
<p><u>Relational Thinking</u> - Involves selecting and carrying out a logical sequence of steps, connecting different concepts or representations, demonstrating understanding of concepts, and relating findings to a context.</p>		
<p><u>Extended Abstract Thinking</u> - Involves devising a strategy, identifying relevant concepts, developing logical reasoning, forming generalizations, and communicating mathematical insight.</p>		

Geometry of Conic Sections

The Geometry included in this standard are related to:

- Graphs and equations of the circle, ellipse, parabola, and hyperbola
- Cartesian and parametric forms
- Properties of conic sections
- Tangents and normals

Problems

Situations set in real-life or statistical contexts that provide opportunities to apply knowledge or understanding of conics section concepts and methods.

Key Vocabulary

Students are expected to understand and use terms related to conics methods, such as:

- | | | |
|-------------------------------------|--|--|
| <input type="checkbox"/> Circle | <input type="checkbox"/> Cartesian | <input type="checkbox"/> Eccentricity |
| <input type="checkbox"/> Ellipse | <input type="checkbox"/> Parametric | <input type="checkbox"/> Foci |
| <input type="checkbox"/> Parabola | <input type="checkbox"/> Tangent | <input type="checkbox"/> Asymptotes |
| <input type="checkbox"/> Hyperbola | <input type="checkbox"/> Normal | <input type="checkbox"/> Directrix |
| <input type="checkbox"/> Major Axis | <input type="checkbox"/> Latus Rectum | <input type="checkbox"/> Vertex |
| <input type="checkbox"/> Minor Axis | <input type="checkbox"/> Semi-Major Axis | <input type="checkbox"/> Semi-Minor Axis |