

The **three basic conic sections** are the ellipse (a circle is a special type of ellipse), the hyperbola and the parabola. First, we will discuss the ellipse.

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|  **OBJECTIVES \_\_\_\_\_ ELLIPSES** (Pages 574 – 584) |
| Define *ellipse* as a conic section. |
| Given the standard equation of an ellipse with center (h, k), sketch the ellipse. |
| Locate the key points of an ellipse: center, vertices, co-vertices, major axis, minor axis, foci. |
| Understand that a circle is a special type of ellipse. |
| Find the eccentricity, ***e = c/a***, of an ellipse. Note that 0 ≤ e ˂ 1. Also, when e = 0, the ellipse is a circle. |
| Find the equation of an ellipse based upon given information. |
| Model an actual situation with an ellipse.  |

**TUESDAY (4.29.25)**

**Discuss the previously assigned work:** Page 583, #21 – 35, odds.

**Class Work/Homework:** Pages 583, 584 (#45, 47, 49, 60).

**THURSDAY (5.1.25)**

**Discuss the previously assigned work:** Pages 583, 584 (#45, 47, 49, 60).

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| **New OBJECTIVES: HYPERBOLAS, Section 8.3** (pages 585 – 591) |
| * Define *hyperbola* as a conic section.
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| * Derive the standard equation of a hyperbola with center (h, k), sketch the hyperbola.
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| * Identify the key features of a hyperbola: center, 2 vertices, transverse axis, conjugate axis, 2 asymptotes, 2 foci, and the focal axis.
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| * Find the eccentricity of a hyperbola
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| * Find the equation of a hyperbola based upon given information.
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| * Model an actual situation with a hyperbola.
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**Introduction to hyperbolas.**

**Class Work:**

* Page 592 (#1, 3, 5).
* Rug Problem (Due at the beginning of your next class meeting).

**Homework:** Page 592: (#11, 13, 15).

**FRIDAY (5.2.25) A-DAY, NO CLASS**