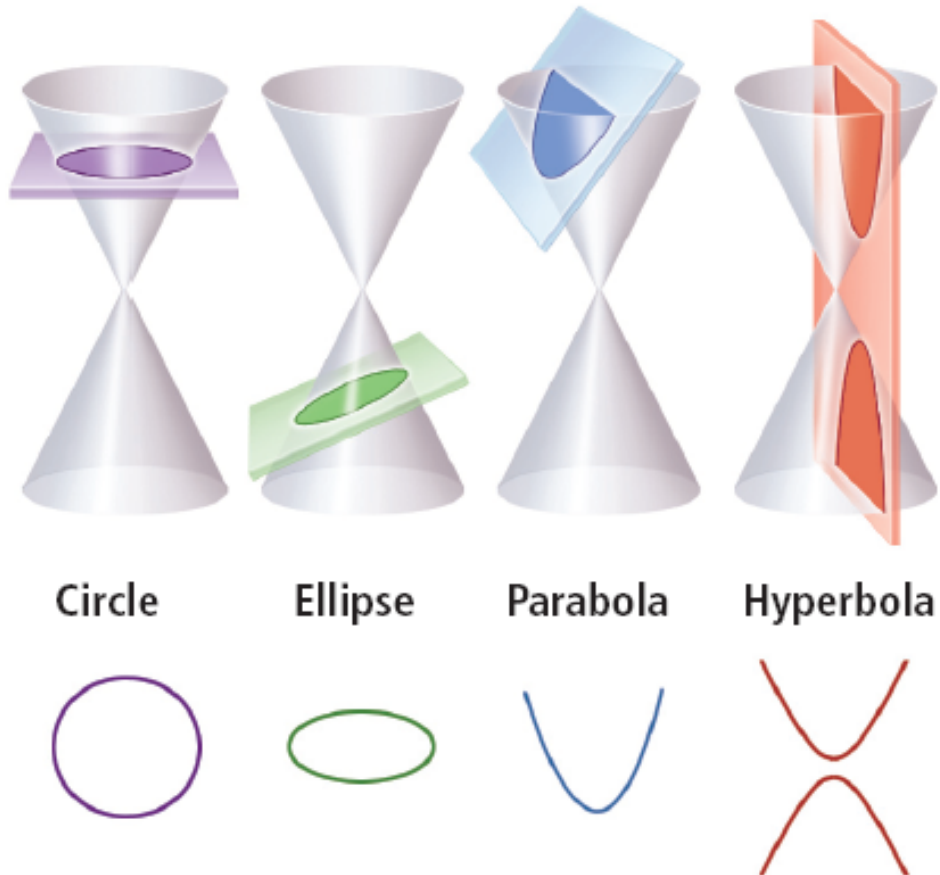


## Introduction to Conic Sections

This chapter will be on Conic Sections.

**Conic sections** are formed by the intersection of a double right cone and a plane.



Every conic section can be defined in terms of distances.

Let's Review:

**Distance Formula:**

**Midpoint Formula:**

Section 10.1

Example #1:

Find the distance between  $(8, -1)$  and  $(-2, -4)$ . Then find the midpoint.

You try:

Find the distance between  $(4, 3)$  and  $(-1, 5)$ . Then find the midpoint.

Example #2:

**The distance between the point  $(a, 3)$  and  $(-2, 9)$  is equal to 10.  
Find the value(s) of  $a$ .**

**The midpoint between the points  $(a, b)$  and  $(-2, 9)$  is  $(1, 4)$ .  
Find the values of  $a$  and  $b$ .**

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Example #3:

**Find the center and radius of a circle that has a diameter with endpoints  $(5, 4)$  and  $(0, -8)$ .**

You try: **Find the center and radius of a circle that has a diameter with endpoints  $(3, 7)$  and  $(-2, -5)$ .**