Diameter and Circumference of a Circle
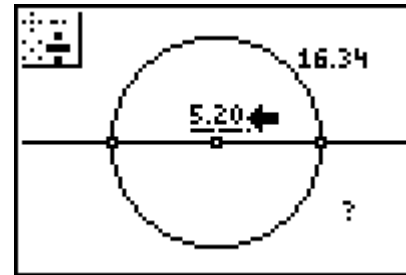
Name _____

Class _____

In this activity you will

- *Draw a circle*
- *Measure the diameter of the circle*
- *Measure the circumference of the circle*
- *Calculate the ratio of the circumference to the diameter.*

1. Open Cabri Jr. and select **New**. Construct a circle.

2. Draw a line through the two points which determined the circle.

3. The line intersects the circle twice, but only one of these intersection points is marked. Mark the other intersection point by choosing **Point**, and then **Intersection**, from the F2 menu. The point is ready to be marked when both the circle and the line are flashing. Now we have two points on the circle which are the endpoints of a diameter.

4. Choose **Measure** and then **D. & Length** from the F5 menu. Find the length of the diameter by selecting each of its endpoints. Show the measurement rounded to the hundredths and move it to a convenient location.

5. With the **Measurement** tool still active, find the circumference of the circle. Show the measurement rounded to the hundredths and move it to a convenient location.

6. Choose **Calculate** from the F5 menu. Select the circumference measurement, press the division key, and then select the diameter measurement. The number displayed is the ratio of the circle's circumference to its diameter.

7. Turn off the **Calculate** tool and grab the center of the circle. Move it to change the size of the circle.

8. To confirm that the ratio remains 3.14, repeat the **Calculate** procedure. (It is actually recalculated each time the size of the circle changes, but it is impossible to tell since this number is unchanging.)