



Pi Day 2025

Activity #3: Circle Ratio

Goal: To realize that, no matter the circumference of the object, there will always be approximately $3\frac{1}{7}$ diameters.

Step 1: Find multiple cylindrical objects (can, paper towel roll, etc.) to measure.

Step 2: Wrap a string around the circumference of each object, one at a time, and cut.

Step 3: Lay the string across the diameter of the object, with one end lined up on the circumference. Cut the string to the length of one diameter.

Step 4: Repeat the process to create 3 full diameters with $\sim \frac{1}{7}$ of a diameter left over, no matter the object.

Step 5: Measure the circumference and the diameter, and use the table below to record them with the name of the object. Find the ratio of the two measurements.

Object	Circumference (C)	diameter (d)	$\frac{\text{Circumference}}{\text{diameter}}$	$C \div d$

Extension: Using the ratio $\frac{\text{Circumference}}{\text{diameter}} \sim \frac{22}{7}$ and a radius of 6,371 km, find the circumference of the Earth.