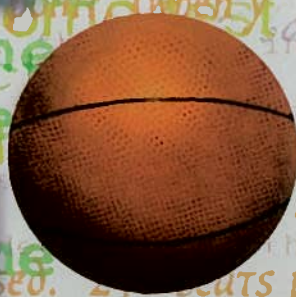
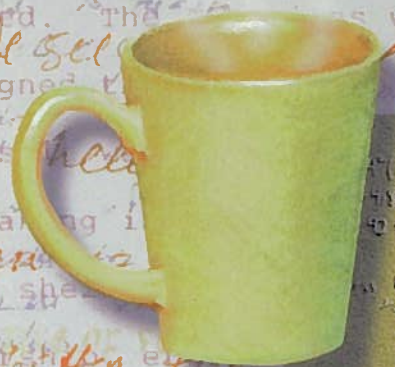


A WATCHED CUP NEVER COOLS

Lab Activities
for Calculus
& Precalculus

Ellen Kamischke



A WATCHED CUP NEVER COOLS

Lab Activities for Calculus & Precalculus

A Watched Cup Never Cools

contains 19 exciting and motivating activities for calculus and precalculus students. Concepts come alive as students explore the rate of change of the volume of a sphere by sucking on a Tootsie® Roll Pop. They "watch" a cup of hot liquid cool to room temperature to observe the rate of change of the temperature. They use a topographical map to compute the volume of water in a lake and then determine how quickly, or slowly, a pollutant will be eliminated from water given the water flow into and out of the lake. They can use graphing calculators, electronic data-gathering devices, and dynamic geometry software, when available, to investigate functions, continuity, critical points, and limits. Many of the activities are designed to be used as group investigations, and students learn how to present their results in a lab report format.

Also included in this book are 11 writing assignments that encourage students to reflect on the ways in which calculus and precalculus concepts relate to their lives and the world around them. These writing assignments are appropriate for journal entries, alternative assessments, or review assignments for tests.



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