



# Quarterly Problem

- *Math Edition* -

## How to optimize ice cream cones?



Everyone loves ice cream! But have you ever looked at an ice cream cone through the eyes of mathematics? In this task, we are trying to optimise the ice cream cone!

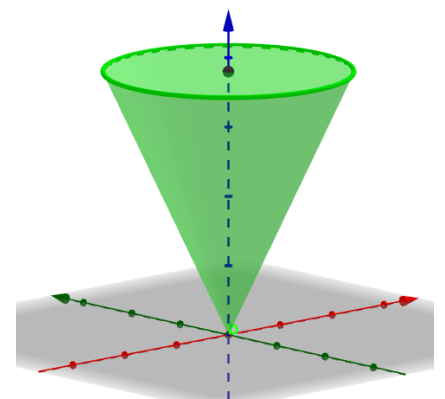
Think about what an ice cream cone is mathematically. Then think about different criteria to which optimizing ice cream cones could refer (area, volume, stability, looks, ...). Try to fix one way in which you want to optimize your ice cream cone. Make really precise what your criterion is.

Then try to find the cone which is optimal in this way:

- You can design an experiment to do this.
- You can also calculate. If algebraic and calculus steps get somewhat complicated, consider using appropriate software environments. You could for example use the link [cabinet.bg/index.php?lang=en](http://cabinet.bg/index.php?lang=en) and look for appropriate applets by the key word *cone*.
- You may discuss possible approaches with your friends (don't eat all the errors of the experiment 😊);

### Brainstorm-Box

How would you design an experiment to measure the lateral area and the volume of your ice cream cone?



## Which method is the best?

Focus on phrasing your approach in a clear and comprehensible way.

In which way did you want to optimise your cone? How did you do this?