

## Task #3a: Megalomania

### Measure the Schoolhouse.

Exactly! Measure the school building.

This isn't merely a technical task. A school building is something very big, and to determine its dimensions one has to be clever and inventive. How to measure something enormous? Which dimensions are important in a school?

There are many possibilities.

a) Indeed, it is easier to measure the length, width, and height of the school building. The first two are quite effortless to manage, but how to find out the height of the building? One option is to go for the approximate answer – measure the height of the floors and try to get the dimensions of the floor slab\* as well in order to calculate the height according to this data. If the building is made of bricks, you can measure the height of the brick and the mortar joint and use this information instead. To compare the results of different teams, you can calculate the volume of the school building.

b) The school can be numerically presented in various ways. Some of the data is already known, such as the number of students. What more could we find out? How many square metres of floor area is there per student? How many chairs per student? How many times is the main door used to enter or exit the building during a break or throughout the day? How to measure the school with a clock? A scale? A thermometer? A heart rate monitor? A step counter? It can be very interesting to figure this out. It is not necessary to try out everything, but you can make a list of various numeric data that could be collected about the school. If desired, involve a maths teacher, physics teacher, or perhaps school psychologist in the discussion.

c) You can approach this task in a more creative way and think about alternative, unscientific units of measurement. What if you measure the building with a human chain? What is the number of people holding hands needed to encircle the schoolhouse? How long are the corridors according to this method?

d) Or instead – where is the midpoint of the building? How to determine this? How to find it? What is happening there?

e) ...

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\* A floor slab is the slab, panel, or structure that is simultaneously the ceiling of the lower floor and the floor of the upper floor.

Present your collected measurements as the outcome of this task, and give a short explanation on why you decided to measure these things.

### **A Few More Notes**

1. The aim of the task is: a) to demonstrate how even the simplest actions like measuring may demand planning and ingenuity (how to measure something very large); and b) to emphasize that measuring a place does not necessarily mean using a tape measure (measuring the dimensions).
2. Accuracy is a relative term. Of course, you have to aim for precision and scientific methods while planning the measuring. But data can also be presented as an estimation (the height of the schoolhouse, for example) – in this case the thought process leading to the estimated result might be interesting.

1, 2, 3 – go!

### **Some Relevant References:**

#1

**"Dimensions" George Perec (1974)**

Can be found as a PDF in the task folder

A short paragraph of the author's book, "Species of spaces and other pieces", observes the phenomenon of being positioned in space (residing in space) through poetic, everyday, personal, and playful aspects.

#2

**The Baltic Chain (1989)**

A 600-km-long chain made by two million people is an example from the recent past of the Baltic countries, embodying the dimensions of the people's will for freedom.

#3

**Charles and Ray Eames, "Powers of Ten" (1977)**

[www.youtube.com/watch?v=OfKBhvDjuy0](http://www.youtube.com/watch?v=OfKBhvDjuy0)

Charles and Ray Eames are some of the best-known American designers, architects, and multiple talents of the 20th century, whose work was visionary in several fields. The video clip "Powers of Ten" from 1977 is a masterpiece of cinematography, an exploration of magnitudes illustrating worlds that are tens of times bigger or smaller than our habitual scale.