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## Drop in the Bucket?

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## Drop in the bucket?



The following information is taken from a science literacy test<sup>1</sup> concerning the distribution of water in different places (e.g., glaciers and oceans). It imagines that the total quantity could be contained in 100 buckets, and states that (i) about 95 of those buckets contain sea water, and (ii) about two buckets are filled from ice from glaciers and polar regions. The remaining buckets are filled by water from groundwater, lakes and streams, and the atmosphere.

*(This topic was kindly suggested by Professors Andreas Muller and Cedric Loretan.)*

### ▶ Question 1:

Estimate by how much the sea level will rise from the melting of glaciers and polar regions.

### ▶ Question 2:

Estimate the number of 5-gallon buckets that would contain the water from the oceans.

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### Reference

1. [http://edudoc.ch/record/36471/files/Standards\\_Nawi\\_f.pdf](http://edudoc.ch/record/36471/files/Standards_Nawi_f.pdf).

Look for the answers online at [tpt.aapt.org](http://tpt.aapt.org) under “Browse,” at the very end of the current issue.

**Fermi Questions** are brief questions with answers and back-of-the-envelope estimation techniques. To submit ideas, please email John Adam ([jadam@odu.edu](mailto:jadam@odu.edu)).