

'Plausible Estimation' Estimating for Amazing Facts Tasks - Set #3

Malcolm Swan

Mathematics Education
University of Nottingham
Malcolm.Swan@nottingham.ac.uk

Jim Ridgway

School of Education
University of Durham
Jim.Ridgway@durham.ac.uk

The aim of this assessment is to provide the opportunity for you to:

- develop a chain of reasoning that will enable you to estimate quantities to an appropriate degree of accuracy
- choose suitable units for your estimate
- communicate the assumptions upon which your estimate is based.

1. High stack

Suppose you have a very large sheet of paper. You tear it in half and put one half on top of the other. You now have a stack of two sheets.

You now tear the whole stack in half and place one half on top of the other to make a new stack. You repeat this process, tearing 50 times. (Yes I know its impossible - just imagine you could).

How high would the stack be? 50 feet? 100 feet? A mile? or more...?
Make a sensible estimate, based on careful reasoning.

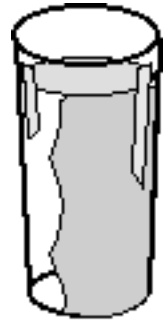


Assumptions

Reasoning

2. The swimming pool and the glass.

How long would it take you to empty an olympic size swimming pool with a glass?



<i>Assumptions</i>
<i>Reasoning</i>

3. The briefcase of cents

Suppose you filled a briefcase with one cent coins.

How much would the money be worth?



Assumptions

Reasoning