

# Problem Solving and Modelling Task

Alexander Arthur

January 7, 2022

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## 1 Assumptions and observations

### 1.1 Assumptions

Dam is not tidal, no flow in from rivers, no water is released either; the water level will not change.

Bacteria will not begin to compete for food source etc, meaning that their growth will continue its upwards trend; the only limiting factor in the lake's bacteria population is the lake's size.

### 1.2 Observations

dam passes vertical line test, meaning it can be modelled as as function

## 2 Translation of mathematical procedures