

Length of pond  $L.pond := 2 \text{ m}$

Width of pond  $W.pond := 1.5 \text{ m}$

Width of pond  $D.pond := 1.5 \text{ m}$

Volume of pond  $V.pond := L.pond \cdot W.pond \cdot D.pond$   $V.pond = 4.5 \text{ m}^3$

Hose diameter  $D.hose := 50 \text{ mm}$

Assumed flow rate  
through hose  $F.mean := \begin{bmatrix} 0.015 \\ 0.019 \\ 0.023 \end{bmatrix} \frac{\text{m}^3}{\text{min}}$

Time to fill pond based  
on assumed flow rate  $T := \frac{V.pond}{F.mean}$   $T = \begin{bmatrix} 5 \\ 3.9 \\ 3.3 \end{bmatrix} \text{ hr}$