4.8.1 Equations of Definition

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“…is defined as…”

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$$R \equiv \frac{A}{P_W}$$

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"Hydraulic radius **is defined as** the ratio of cross-sectional area to wetted perimeter."

4.8.4 Heuristic Equations

- From the American Heritage Dictionary:

  Heuristic *adj.* Of or relating to a usually speculative formulation serving as a guide in the investigation or solution of a problem

- From Wikipedia entry for Heuristic:

  "Heuristic methods are used to speed up the process of finding a good enough solution, where an exhaustive search is impractical."

4.8.4 Heuristic Equations

A model for flow from a reservoir:

$$Q = a_R \cdot V^{b_R}$$

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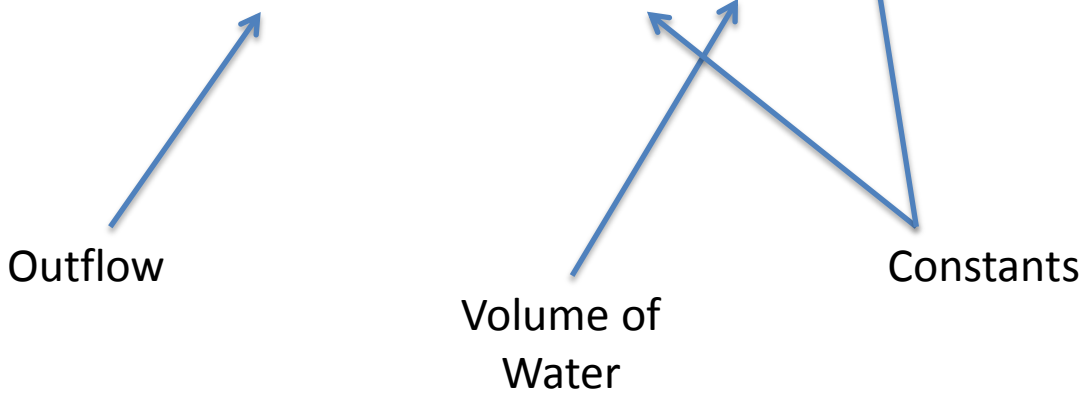
A model for flow from a reservoir:

$$Q = a_R \cdot V^{b_R}$$



4.8.4 Heuristic Equations

A model for flow from a reservoir:

$$Q = a_R \cdot V^{b_R}$$

4.8.4 Heuristic Equations

A model for flow from a reservoir:

$$Q = a_R \cdot V^{b_R}$$

Assume $b_R = 1$

4.8.4 Heuristic Equations

A model for flow from a reservoir:

$$Q = a_R \cdot V$$

- $1/a_R$ is the average time an element of water will spend in the reservoir (**residence time**)

4.8.4 Heuristic Equations

A model for flow from a reservoir:

$$Q = a_R \cdot V$$

Not perfect, but captures essential aspects and is mathematically tractable