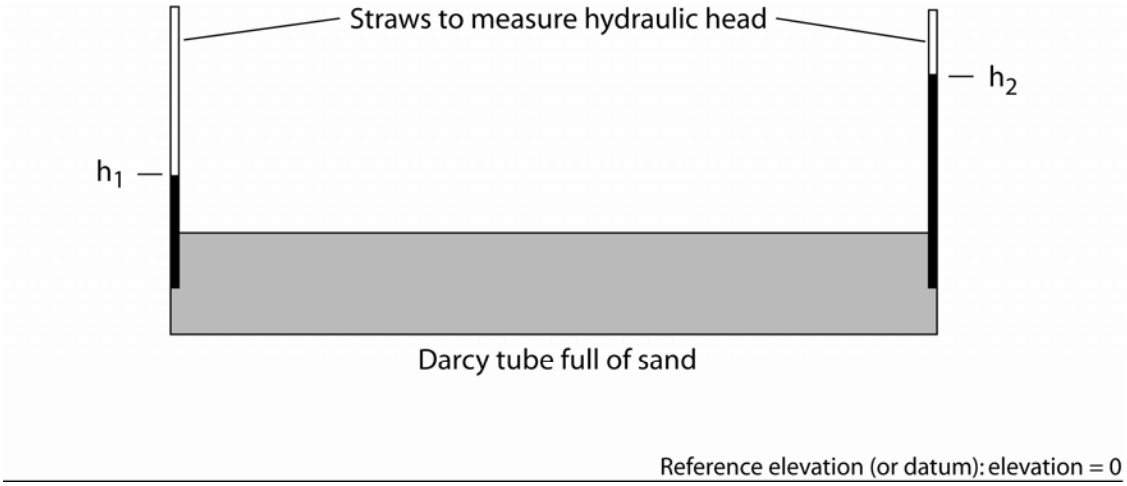
Examples: Hydraulic Head and Aquifers March 4, 2014

1. **In the Darcy tube below, show the two components of hydraulic head (elevation and pressure head) at each "straw" used as a monitoring well.**

   Draw an arrow to show the direction of flow.

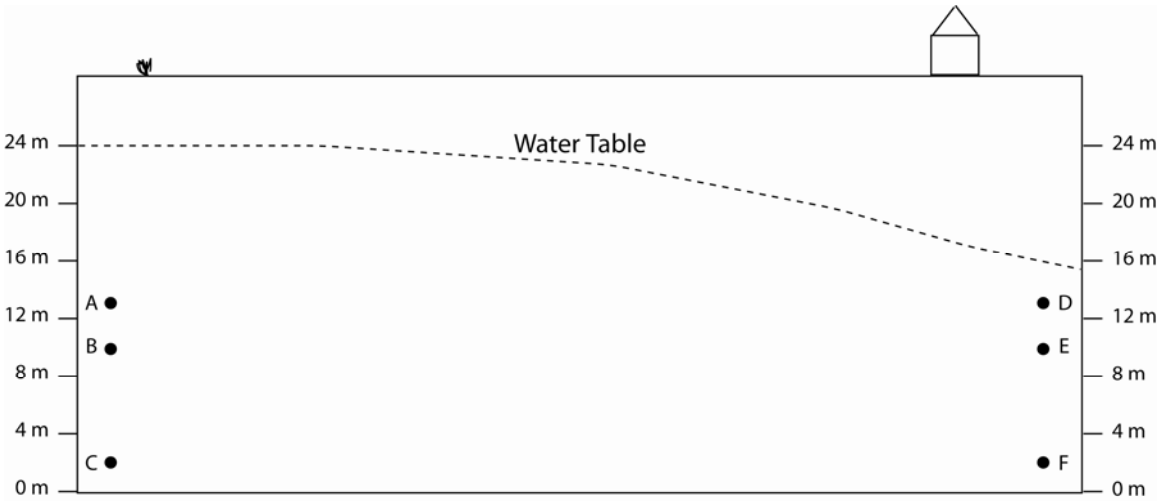


2. **In the unconfined aquifer shown below, write the hydraulic head next to each marked point: A through F. Based on those answers, draw an arrow showing the flow direction.**

   For each point, report the elevation and pressure head:

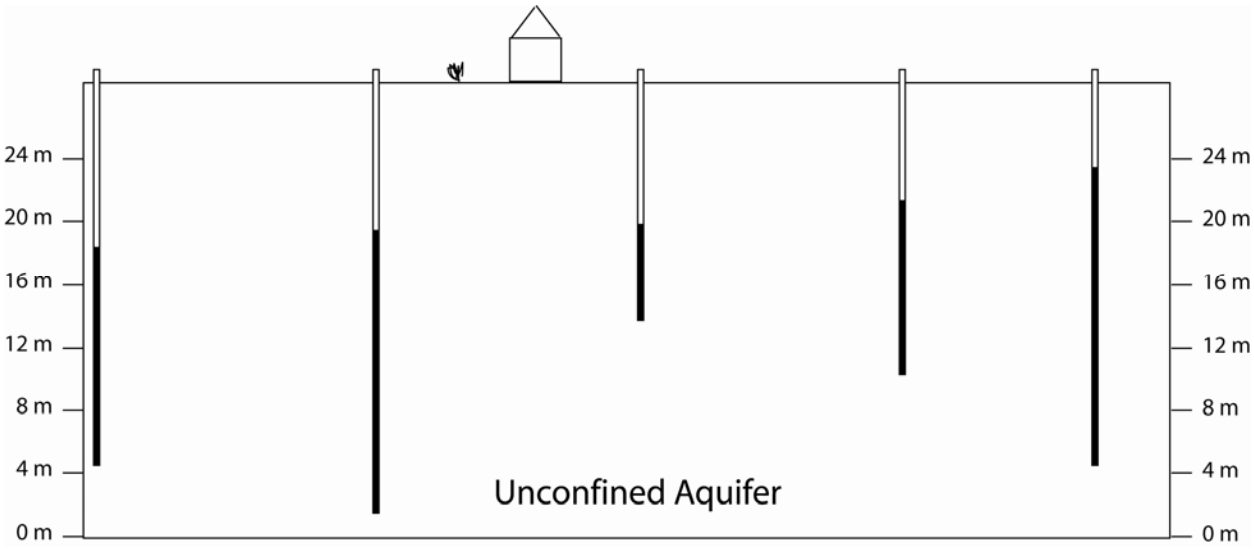
A: _____ B: _____ C: _____

D: _____ E: _____ F: _____



3. **Using the information from the monitoring wells in the unconfined aquifer, sketch in the water table.**

   What is the flow direction?



4. There are several monitoring wells in the aquifer layers below.

- Label the aquifers as "unconfined" or "confined". *Hint: there is one of each!*

- Sketch in the water table in the unconfined aquifer. Which way is flow in the unconfined aquifer?

- In general, is flow driven from the unconfined aquifer to the confined aquifer, or vice-versa? How can you tell?

- Suppose the unconfined aquifer was contaminated by MTBE, which dissolves in water. Would you be worried about the confined aquifer becoming contaminated? Why or why not?