Using data from the sand tank on the next sheet

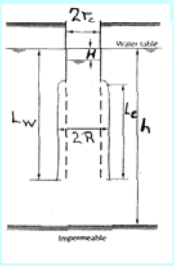
Estimate K via Hvorslev AND Bouwer and Rice Methods

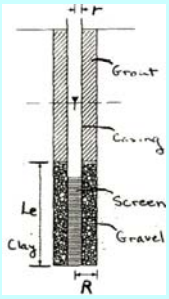
How do the K values compare? And for the pump test we did earlier in the semester?

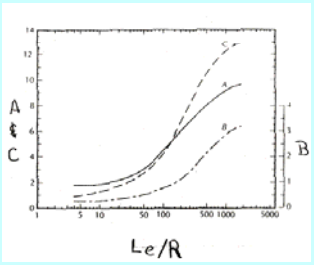
How does the tank fit the assumptions of the methods?

$$K = \frac{r^2 \ln\left(\frac{L_e}{R}\right)}{2\,L_e\,T_o}$$

$$K = \frac{r_c^2 \ln\left(\frac{R_e}{R}\right)}{2\,L_e} \frac{1}{t} \ln\left(\frac{H_o}{H_t}\right)$$







$$for\ L_w < h \quad \ln\left(\frac{R_e}{R}\right) = \left[\frac{1.1}{\ln\left(\frac{L_w}{R}\right)} + \frac{A + B\ln\left(\frac{(h - L_w)}{R}\right)}{\frac{L_e}{R}}\right]^{-1}$$

$$for\ L_w = h \quad \ln\left(\frac{R_e}{R}\right) = \left[\frac{1.1}{\ln\left(\frac{L_w}{R}\right)} + \frac{C}{\frac{L_e}{R}}\right]^{-1}$$

Time since slug sec	h above initial water level cm
	6.6
2	6
4	4.6
6	3.6
8	3
10	2.6
12	2.2
14	1.9
16	1.65
18	1.5

Bore radius = 4.9cm
Screen Length = 6cm
Saturated thickness = 30cm