

From book p. 97 1 (a) - (c)

2 (a) - (c)

3

4

p. 135 3, 4, 5, 6

p. 136 19, 20

and

Problem: If a constant level sound, level S_0 , is turned on at time 0 in a silent concert hall, the diffuse sound level in the hall rises from 0 to a "steady state" level (in the limit as time goes to $+\infty$). The rise time is by definition the time it takes for the level to reach one-half of its ultimate steady state level. Show that the rise time is (to a good approximation)

$(\frac{1}{20})T_0$, where $T_0 =$ the reverberation time definition the time required for a diffuse field level to drop by a factor of 10^{-6} (when there is no sound source present), as discussed in class.