HW#18

Using $P(t) = 6.48e^{-3} P_0 \left[t^{-0.2} - (t+T_0)^{-0.2} \right]$

w/ t = time after shutdown
T_0 = reactor operated time

2 a) 1 year @ 3000 MWth → b) 6 months @ 1000 MWth → scram

	Power	t	t_0	P_0 [MWth]	$P(t)$ [MWth]
6 min	P_a	6 months + 6 min	1 year	3000	0.465
after	P_b	6 min	6 months	1000	17.104
scram	P	-	-	-	17.564
1 day	P_a	6 months + 1 day	1 year	3000	0.464
after	P_b	1 day	6 months	1000	4.195
scram	P	-	-	-	4.659

after 6 min $P(t) = 17.564$ MWth

after 1 day $P(t) = 4.659$ MWth

w/ 1 year = 12 months
1 month = 30.4167 days
1 day = 24 hrs
1 hour = 60 min
1 min = 60 sec