Self-Evaluation Problems
Class 5

Below find times to "drug failure" (as determined by a treating psychiatrist) for 25 patients in a study comparing a new treatment for schizophrenia to a standard treatment

Trt group	Times (wks)
Standard	3, 5+, 6, 8, 8, 9, 13, 15+, 16, 16, 17, 18
New	4, 6, 9, 9, 10+, 11, 12, 13+, 14+, 16, 17, 18, 20

+ denotes a censored observation

1. Determine the number of events and total person-weeks of follow-up for each of the two treatments:

Treatment		**Overall Event Rate**
Standard	Events= 10	10/134 = 0.075 events per person-week
	Person-weeks=134	
New	Events=10	10/159 = 0.063 events per person-week
	Person-weeks=159	

2. Construct the Kaplan-Meier survival curves by treatment:

Standard Treatment				New Treatment			
Event-Time (t_i)	Number at Risk (n_i)	$\frac{(n_i - y_i)}{n_i}$	$\hat{S}(t_i)$	Event-Time (t_i)	Number at Risk (n_i)	$\frac{(n_i - y_i)}{n_i}$	$\hat{S}(t_i)$

3. What is the approximate probability of remaining on the new treatment more than 10 weeks?

4. Plot the survival curves for each treatment group on the axes below.