Chapter 1 Lesson 5: In-Class Worksheet

Start by finding the values of $\hat{s}_t$ in Table 5. Use Table 4 as needed to complete Table 5.

Table 5: Compute $\hat{s}_t$; then use Table 4 to find $\bar{s}_t$. Use $\bar{s}_t$ to find the random component and the seasonally adjusted time series values.

	Revenue					**Seasonally Adjusted**
Quarter	x_t	$\hat{m}_t$	$\hat{s}_t$	$\bar{s}_t$	**Random**	x_t
2005 Q1	1.24	NA				
2005 Q2	0.48	NA				
2005 Q3	1.24	1.315				
2005 Q4	1.71	1.616				
2006 Q1	2.42	1.829				
2006 Q2	1.71	1.947				
2006 Q3	1.71	2.251				
2006 Q4	2.19	2.709	0.808	0.905	0.893	2.42
2007 Q1	4.37	3.136	1.393	1.314	1.06	3.325
2007 Q2	3.42	3.469	0.986	0.947	1.041	3.612
⋮	⋮	⋮	⋮	⋮	⋮	⋮

Table 4: Table of $\hat{s}_t$ values, quarterly means of $\hat{s}_t$, and seasonally adjusted factor $\bar{s}_t$.

Year	Q1	Q2	Q3	Q4
2005	NA	NA		
2006				0.808
2007	1.393	0.986	0.864	0.702
2008	1.525	0.785	0.683	1.325
2009	1.182	0.781	0.834	1.005
2010	1.193	0.912	0.849	0.963
2011	1.106	0.961	0.999	0.734
2012	1.328	1.141	0.865	0.828
2013	1.249	1.019	0.819	0.856
2014	1.301	1.012	0.783	0.818
2015	1.367	1.013	0.847	0.891
2016	1.355	0.928	0.781	0.855
2017	1.412	0.935	0.776	0.864
2018	1.405	0.939	0.808	0.968
2019	1.303	0.894	0.816	0.956
2020	1.356	0.851	0.84	0.835
2021	1.326	1.005	0.875	0.872
2022	1.282	0.995	0.849	0.933
2023	1.219	0.989	NA	NA
Mean				
$\bar{s}_t$				