

## Forecasting Solution

Data for  $t$  and  $X_t$  are given. The rest should be calculated by using  $\alpha = 0.4$ ,  $\beta = 0.2$  and seasonality of 4. Note: for calculating  $F_t$  and  $T_t$  use the adjusted result and not the original  $X_t$ .

$t$	$X_t$	M.A.	Prel.	Ave.	Final	Adj.	$F_t$	$T_t$
1	23						30.9	2.2
2	45						38.1	3.2
3	30	38.6	0.777	0.777	0.787	38.1	38.2	2.6
4	52	40.9	1.271	1.271	1.288	40.4	40.6	2.5
5	32	43.6	0.734	0.734	0.744	43.0	43.1	2.5
6	54	46.3	1.166	1.166	1.181	45.7	45.6	2.5
7	43						54.6	3.8
8	60						46.6	1.4

Forecast:

$t$	Adj.	Actual
9	52.7	39.2
10	54.1	63.9
11	55.5	43.7
12	56.9	73.3

Data for  $t$  and  $X_t$  are given. The rest should be calculated by using  $\alpha = 0.4$ ,  $\beta = 0.2$  and seasonality of 2. Note: for calculating  $F_t$  and  $T_t$  use the adjusted result and not the original  $X_t$ .

$t$	$X_t$	M.A.	Prel.	Ave.	Final	Adj.	$F_t$	$T_t$
1	23						29.4	2.8
2	45	35.8	1.257	1.230	1.217	37.0	34.1	3.8
3	30	39.3	0.763	0.792	0.783	38.3	38.1	3.3
4	52	41.5	1.253			42.7	41.9	3.5
5	32	42.5	0.753			40.9	43.6	2.4
6	54	45.8	1.179			44.4	45.4	2.6
7	43	50.0	0.860			54.9	50.8	4.2
8	60					49.3	52.7	2.2

Forecast:

$t$	Adj.	Actual
9	54.9	43.0
10	57.1	69.5
11	59.3	46.4
12	61.5	74.8