

# Adstock Rate - Deriving with Analytical Method

## Instructions

1. Insert Sales and Advertising
2. Open Solver by going to the Data menu and selecting Solver  
If Solver isn't available then load the Add-in.
3. Click Solve

		Advertising	Advertising	Model Results	
		Before Adstock	After Adstock	After Adstock	
	Sales				
1	670,871	0.173	0.173	Adstock Rate	17.75%
2	35,524,494	0.302	0.333	$\alpha$	22640964.0
3	50,173,057	0.302	0.361	$\beta$	11842743.6458
4	46,849,336	0.302	0.366	SSE	#####
5	39,246,118	0.262	0.327	Correlation	0.5821
6	21,362	0.023	0.081	R-Squared	0.3389
7	8,831	0.023	0.038		
8	17,987	0.023	0.030		
9	72,788	0.023	0.029		
10	70,691,096	2.731	2.736		
11	98,352,774	3.814	4.299		
12	96,408,086	3.814	4.577		
13	97,663,276	3.814	4.626		
14	72,524,082	4.611	5.432		
15	44,150,510	5.674	6.638		
16	293,596,202	5.674	6.852		
17	52,892,091	5.674	6.890		
18	91,911,501	5.674	6.897		
19	93,892,473	4.558	5.782		
20	120,030,002	4.558	5.584		
21	50,012,648	4.558	5.549		
22	47,577,866	4.558	5.543		
23	66,395,702	5.040	6.023		
24	108,721,179	5.233	6.301		
25	69,263,878	5.233	6.351		
26	154,607,585	5.233	6.360		
27	71,141,134	5.259	6.388		
28	69,654,386	5.326	6.459		
29	62,962,474	5.326	6.472		
30	147,178,533	5.326	6.474		
31	73,797,654	5.326	6.474		
32	76,441,432	4.728	5.877		
33	69,958,251	4.628	5.671		
34	84,762,834	4.628	5.634		
35	89,314,294	4.628	5.628		
36	73,083,886	4.379	5.377		

37	148,786,415	4.279	5.233
38	77,341,625	4.279	5.208
39	70,677,953	4.279	5.203
40	73,150,392	4.153	5.076
41	81,245,287	3.837	4.738
42	69,788,971	3.837	4.678
43	52,650,999	3.837	4.667
44	114,397,752	3.837	4.665
45	74,672,993	5.512	6.340
46	76,415,745	5.512	6.637
47	78,010,767	5.512	6.689
48	150,047,690	5.512	6.699
49	67,177,030	3.425	4.614
50	68,384,498	1.860	2.679
51	70,872,725	1.860	2.336
52	75,167,242	1.860	2.275
53	<u>51,431,436</u>	<u>1.329</u>	1.733