Facebook/Instagram Channel	Today, April 2015	Month 1	Month 2, June 2015	Month 3, July 2015	Month 4	Month 5	Month 6
Revenue	0	30			30	30	30
Product/Services Cost (COGS)	0	18			18	18	18
Marketing/Acquisition Costs	$91	0			0	0	0
Customer Profit	-$91	12			12	12	12
Probability of Being Active	100%	86%			82%	79%	75%
Expected Profit	-$91	10.341			9.8849619	9.455954554	9.024763026
Present Value of Expected Profit	-$91	9.400909091			8.16939	7.104398613	6.164034578
Discount Exponent		1			2	3	4
Churn Rate		4.25%	4.48%	4.45%	4.41%	4.34%	4.56%
LTV	**-$22**						

Revenue	30
Product/Services Cost (COGS)	18
Marketing Costs	0

NOTES/ASSUMPTIONS:

1. I assumed the off months were June, people tend to go on vacation/visit the months occuring.

2. For my month 1 Probabilities of being a free box ordered another box from H
Present Value = Expected Profit / (1.1 ^

Traditional Channels	Today, April 2015	Month 1	Month 2, June 2015	Month 3, July 2015	Month 4	Month 5	Month 6
Revenue	0	30			30	30	30
Product/Services Cost (COGS)	0	18			18	18	18
Marketing/Acquisition Costs	$148	0			0	0	0
Customer Profit	-$148	12			12	12	12
Probability of Being Active	100%	87%			84%	81%	78%
Expected Profit	-$148	10.43388			10.05826032	9.705215383	9.374267538
Present Value of Expected Profit	-$148	9.485345455			8.312611835	7.291671963	6.402750863
Discount Exponent		1			2	3	4
Churn Rate		3.39%	3.25%	3.30%	3.60%	3.51%	3.41%
LTV	**-$74**						

1a) -$22	LTV for Customer Acquired via Facebook/Instagram, assuming months of no purchase are: Month 2, 3, 7, 8, 14, 1
1b) -$74	LTV for Customer Acquired via Traditional Channels, assuming months of no purchase are: Month 2, 3, 7, 8, 14, 1
1c) -(74+22)/2 = -96/2 = -$48	Average LTV across all channels

Month 7, November 2015	Month 8, December 2015	Month 9	Month 10	Month 11	Month 12, April 2016	Month 13	Month 14, June 2015
		30	30	30	30	30	
		18	18	18	18	18	
		0	0	0	0	0	
		12	12	12	12	12	
		72%	69%	66%	63%	60%	
		8.647527931	8.286061264	7.916502932	7.581634858	7.235154145	
		5.369434484	4.677265566	4.062417747	3.536888615	3.068411641	
		5	6	7	8	9	
4.14%	4.59%	4.18%	4.18%	4.46%	4.23%	4.57%	4.19%

July, November, and December, with our data starting at April 2015. This is because these are the times where
ir families. Thus it would be more convenient for them to purchase their contacts for these months prior to the

active, I got those values by multiplying 0.9 * (1 - churn rate) for that month since only 90% of those who received
ubble. Calculation of LTV follows that of the slides from lecture 2 using Excel Formulas (Profit = Revenue - COGS,
Discount Exponent, equivalent to dividing by 1.1 discount exponent times).

Month 7, November 2015	Month 8, December 2015	Month 9	Month 10	Month 11	Month 12, April 2016	Month 13	Month 14, June 2015
		30	30	30	30	30	
		18	18	18	18	18	
		0	0	0	0	0	
		12	12	12	12	12	
		75%	73%	70%	68%	66%	
		9.058354722	8.753088168	8.45548317	8.152776873	7.861722738	
		5.624525599	4.940890078	4.338999832	3.80333058	3.33413789	
		5	6	7	8	9	
3.21%	3.26%	3.37%	3.37%	3.40%	3.58%	3.57%	3.15%

5, 19, 20, 26, 27, 31, 32, With Month 0/Today Starting at April 2015
5, 19, 20, 26, 27, 31, 32, With Month 0/Today Starting at April 2015

Month 15, July 2016	Month 16	Month 17	Month 18	Month 19, November 2016	Month 20, December 2016	Month 21	Month 22	Month 23
	30	30	30			30	30	30
	18	18	18			18	18	18
	0	0	0			0	0	0
	12	12	12			12	12	12
	58%	55%	53%			51%	48%	46%
	6.908848693	6.620058817	6.3367203			6.072479063	5.796788514	5.535933031
	2.663660251	2.32029023	2.01907437			1.758980881	1.52647559	1.325258353
	10	11	12			13	14	15
4.19%	4.51%	4.18%	4.28%	4.42%	4.35%	4.17%	4.54%	4.50%

Month 15, July 2016	Month 16	Month 17	Month 18	Month 19, November 2016	Month 20, December 2016	Month 21	Month 22	Month 23
	30	30	30			30	30	30
	18	18	18			18	18	18
	0	0	0			0	0	0
	12	12	12			12	12	12
	63%	61%	59%			57%	55%	53%
	7.583417754	7.333164968	7.069171029			6.848612893	6.633566448	6.396748126
	2.923735826	2.570229585	2.252455745			1.983799206	1.746825373	1.531330643
	10	11	12			13	14	15
3.59%	3.54%	3.30%	3.60%	3.57%	3.45%	3.12%	3.14%	3.57%

Month 24, April 2017	Month 25	Month 26, June 2017	Month 27, July 2018	Month 28	Month 29	Month 30	Month 31, November 2017
30	30			30	30	30	
18	18			18	18	18	
0	0			0	0	0	
12	12			12	12	12	
44%	42%			40%	39%	37%	
5.284601671	5.066876082			4.836839908	4.63707842	4.441857418	
1.150083295	1.002454421			0.8699481729	0.7581993758	0.6602538019	
16	17			18	19	20	
4.54%	4.12%	4.56%	4.55%	4.54%	4.13%	4.21%	4.22%

Month 24, April 2017	Month 25	Month 26, June 2017	Month 27, July 2018	Month 28	Month 29	Month 30	Month 31, November 2017
30	30			30	30	30	
18	18			18	18	18	
0	0			0	0	0	
12	12			12	12	12	
52%	50%			48%	46%	45%	
6.192052186	5.970376717			5.763801683	5.568985186	5.394119051	
1.347570966	1.181207205			1.036670396	0.9105735787	0.8018014258	
16	17			18	19	20	
3.20%	3.58%	3.33%	3.37%	3.46%	3.38%	3.14%	3.53%

Month 32, December 2017	Month 33	Month 34	Month 35	Month 36, April 2018
	30	30	30	30
	18	18	18	18
	0	0	0	0
	12	12	12	12
	35%	34%	32%	31%
	4.241973835	4.048539828	3.882549695	3.718317843
	0.5732203462	0.4973468167	0.4335959975	0.3775044425
	21	22	23	24
4.35%	4.50%	4.56%	4.10%	4.23%

Month 32, December 2017	Month 33	Month 34	Month 35	Month 36, April 2018
	30	30	30	30
	18	18	18	18
	0	0	0	0
	12	12	12	12
	43%	42%	40%	39%
	5.215034299	5.04033065	4.859382779	4.687846567
	0.7047105622	0.6191843258	0.5426869168	0.4759364261
	21	22	23	24
3.42%	3.32%	3.35%	3.59%	3.53%