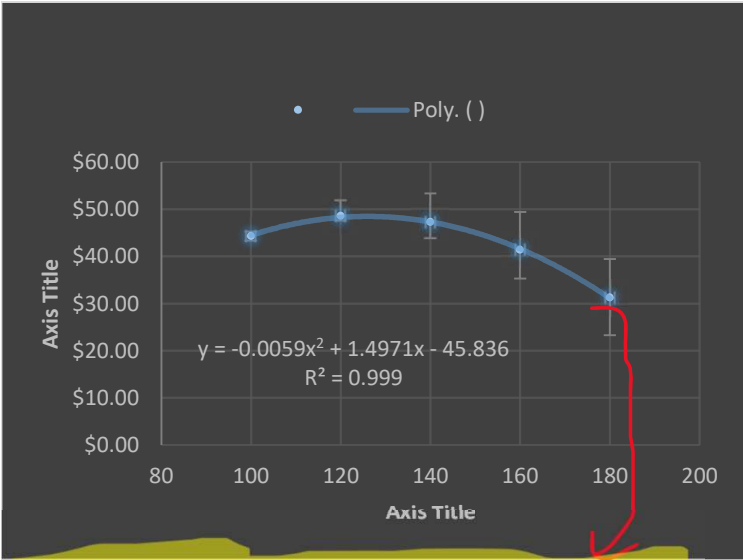


News vendor problem-30 days

INPUT DATA		
Wholesale price c	=	\$0.55
Retail price r	=	\$1.00
Scraped price s	=	\$0.03
Demand parameters μ	=	\$135.70
Demand parameters σ	=	\$27.10



derivate this eq and then assign to 0
then u will get the opt q



		q = 100			
Day	Demand	Sold	Scrap	Profit	Sold
1	105	100	0	\$45.00	105
2	154	100	0	\$45.00	120
3	136	100	0	\$45.00	120
4	164	100	0	\$45.00	120
5	142	100	0	\$45.00	120
6	107	100	0	\$45.00	107
7	108	100	0	\$45.00	108
8	115	100	0	\$45.00	115
9	99	99	1	\$44.03	99
10	129	100	0	\$45.00	120
11	156	100	0	\$45.00	120
12	89	89	11	\$34.33	89
13	141	100	0	\$45.00	120
14	164	100	0	\$45.00	120
15	116	100	0	\$45.00	116
16	153	100	0	\$45.00	120
17	144	100	0	\$45.00	120
18	120	100	0	\$45.00	120
19	124	100	0	\$45.00	120
20	119	100	0	\$45.00	119
21	107	100	0	\$45.00	107
22	91	91	9	\$36.27	91
23	119	100	0	\$45.00	119
24	111	100	0	\$45.00	111
25	132	100	0	\$45.00	120
26	151	100	0	\$45.00	120
27	149	100	0	\$45.00	120
28	161	100	0	\$45.00	120
29	150	100	0	\$45.00	120
30	106	100	0	\$45.00	106
E(profit/day)				\$44.32	E(pro
				± \$0.92	
				0.00%	

0.182574186
 2.471712167
 2.045229642
 0.922952491

8.693129
 2.04523

q = 120		q = 140			q = 160			q = 180		
Scrap	Profit	Sold	Scrap	Profit	Sold	Scrap	Profit	Sold	Scrap	Profit
15	\$39.45	105	35	\$29.05	105	55	\$18.65	105	75	\$8.25
0	\$54.00	140	0	\$63.00	154	6	\$66.18	154	26	\$55.78
0	\$54.00	136	4	\$59.12	136	24	\$48.72	136	44	\$38.32
0	\$54.00	140	0	\$63.00	160	0	\$72.00	164	16	\$65.48
0	\$54.00	140	0	\$63.00	142	18	\$54.54	142	38	\$44.14
13	\$41.39	107	33	\$30.99	107	53	\$20.59	107	73	\$10.19
12	\$42.36	108	32	\$31.96	108	52	\$21.56	108	72	\$11.16
5	\$49.15	115	25	\$38.75	115	45	\$28.35	115	65	\$17.95
21	\$33.63	99	41	\$23.23	99	61	\$12.83	99	81	\$2.43
0	\$54.00	129	11	\$52.33	129	31	\$41.93	129	51	\$31.53
0	\$54.00	140	0	\$63.00	156	4	\$68.12	156	24	\$57.72
31	\$23.93	89	51	\$13.53	89	71	\$3.13	89	91	-\$7.27
0	\$54.00	140	0	\$63.00	141	19	\$53.57	141	39	\$43.17
0	\$54.00	140	0	\$63.00	160	0	\$72.00	164	16	\$65.48
4	\$50.12	116	24	\$39.72	116	44	\$29.32	116	64	\$18.92
0	\$54.00	140	0	\$63.00	153	7	\$65.21	153	27	\$54.81
0	\$54.00	140	0	\$63.00	144	16	\$56.48	144	36	\$46.08
0	\$54.00	120	20	\$43.60	120	40	\$33.20	120	60	\$22.80
0	\$54.00	124	16	\$47.48	124	36	\$37.08	124	56	\$26.68
1	\$53.03	119	21	\$42.63	119	41	\$32.23	119	61	\$21.83
13	\$41.39	107	33	\$30.99	107	53	\$20.59	107	73	\$10.19
29	\$25.87	91	49	\$15.47	91	69	\$5.07	91	89	-\$5.33
1	\$53.03	119	21	\$42.63	119	41	\$32.23	119	61	\$21.83
9	\$45.27	111	29	\$34.87	111	49	\$24.47	111	69	\$14.07
0	\$54.00	132	8	\$55.24	132	28	\$44.84	132	48	\$34.44
0	\$54.00	140	0	\$63.00	151	9	\$63.27	151	29	\$52.87
0	\$54.00	140	0	\$63.00	149	11	\$61.33	149	31	\$50.93
0	\$54.00	140	0	\$63.00	160	0	\$72.00	161	19	\$62.57
0	\$54.00	140	0	\$63.00	150	10	\$62.30	150	30	\$51.90
14	\$40.42	106	34	\$30.02	106	54	\$19.62	106	74	\$9.22
E(profit/day)	\$48.57	E(profit/day)	\$47.25	E(profit/day)	\$41.38	E(profit/day)	\$31.27			
±	\$3.25	±	\$6.07	±	\$8.01	±	\$8.18			
	0.00%		0.00%		0.00%		7.14%			

1\

16.25255	21.4472	21.89522
2.04523	2.04523	2.04523

You need excel 2016 in order to establish a histogram