

INVENTORY RETRIEVAL SIMULATION REPORT

Generated at: 02/12/2025 22:48:46

Algorithm: ALG-IR

Total Revenue: 48,926.78

Final Inventory: 0.0

Total Retrieved: 500.00

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
1	87.45	500.0	54.7	1.045	58.8	54.7	4780.10	0.00	445.3
2	145.07	445.3	29.2	0.856	23.5	23.5	3409.74	0.00	416.2
3	123.20	416.2	39.8	0.917	35.2	35.2	4337.56	0.00	376.3
4	109.87	376.3	45.9	0.947	42.7	42.7	4686.66	0.00	330.4
5	65.60	330.4	60.2	0.982	66.0	60.2	3946.08	0.00	270.3
6	65.60	270.3	55.7	1.114	74.9	55.7	3652.02	0.00	214.6
7	55.81	214.6	0.0	0.880	63.4	0.0	0.00	0.00	214.6
8	136.62	214.6	31.6	1.006	31.9	31.6	4313.59	0.00	183.1
9	110.11	183.1	40.5	1.037	46.6	40.5	4456.38	0.00	142.6
10	120.81	142.6	35.0	0.819	32.4	32.4	3915.70	0.00	107.6
11	52.06	107.6	0.0	1.043	77.2	0.0	0.00	0.00	107.6
12	146.99	107.6	24.2	0.868	23.0	23.0	3382.48	0.00	83.4
13	133.24	83.4	28.1	0.826	27.6	27.6	3673.65	0.00	55.3
14	71.23	55.3	0.0	1.180	75.9	0.0	0.00	0.00	55.3
15	68.18	55.3	0.0	1.186	78.2	0.0	0.00	0.00	55.3
16	68.34	55.3	0.0	1.123	74.0	0.0	0.00	0.00	55.3
17	80.42	55.3	0.0	0.922	55.1	0.0	0.00	0.00	55.3
18	102.48	55.3	0.0	0.839	40.9	0.0	0.00	0.00	55.3
19	93.19	55.3	0.0	1.074	57.3	0.0	0.00	0.00	55.3
20	79.12	55.3	55.3	0.976	59.0	55.3	4372.82	0.00	0.0

Algorithm: ALG-IR-H

Total Revenue: 49,261.77

Final Inventory: 0.0

Total Retrieved: 500.00

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
1	87.45	500.0	54.7	0.849	47.8	47.8	4177.27	0.00	445.3
2	145.07	445.3	29.3	0.998	27.4	27.4	3976.60	0.00	416.1
3	123.20	416.1	40.2	0.814	31.2	31.2	3849.79	0.00	375.9
4	109.87	375.9	46.4	1.164	52.4	46.4	5102.60	0.00	329.5
5	65.60	329.5	59.8	0.904	60.7	59.8	3921.33	0.00	269.7
6	65.60	269.7	54.8	1.065	71.6	54.8	3592.31	0.00	214.9
7	55.81	214.9	0.0	0.925	66.7	0.0	0.00	0.00	214.9
8	136.62	214.9	31.4	1.008	31.9	31.4	4284.93	0.00	183.6
9	110.11	183.6	40.2	1.019	45.8	40.2	4430.38	0.00	143.3
10	120.81	143.3	34.9	0.874	34.6	34.6	4180.53	0.00	108.4
11	52.06	108.4	0.0	1.188	87.9	0.0	0.00	0.00	108.4
12	146.99	108.4	24.2	1.110	29.4	24.2	3554.31	0.00	84.2
13	133.24	84.2	28.2	1.176	39.2	28.2	3756.49	0.00	56.1
14	71.23	56.1	0.0	1.158	74.6	0.0	0.00	0.00	56.1
15	68.18	56.1	0.0	1.039	68.5	0.0	0.00	0.00	56.1
16	68.34	56.1	0.0	1.169	76.9	0.0	0.00	0.00	56.1
17	80.42	56.1	0.0	0.835	49.9	0.0	0.00	0.00	56.1
18	102.48	56.1	0.0	0.878	42.8	0.0	0.00	0.00	56.1
19	93.19	56.1	0.0	0.818	43.7	0.0	0.00	0.00	56.1
20	79.12	56.1	56.1	0.930	56.2	56.1	4435.24	0.00	0.0

Algorithm: Myopic

Total Revenue: 36,636.80

Final Inventory: 0.0

Total Retrieved: 500.00

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
1	87.45	500.0	67.5	0.955	53.8	53.8	4702.16	0.00	432.5
2	145.07	432.5	33.0	0.909	25.0	25.0	3619.88	0.00	399.5
3	123.20	399.5	46.1	1.131	43.4	43.4	5352.98	0.00	353.4
4	109.87	353.4	54.1	0.943	42.5	42.5	4667.63	0.00	299.4
5	65.60	299.4	80.6	0.912	61.3	61.3	4022.09	0.00	218.7
6	65.60	218.7	80.6	1.017	68.3	68.3	4483.59	0.00	138.1
7	55.81	138.1	86.5	0.856	61.7	61.7	3445.65	0.00	51.6
8	136.62	51.6	38.0	1.121	35.5	35.5	4852.93	0.00	13.5
9	110.11	13.5	13.5	0.830	37.3	13.5	1489.90	0.00	0.0

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
10	120.81	0.0	0.0	1.195	47.3	0.0	0.00	0.00	0.0
11	52.06	0.0	0.0	1.109	82.0	0.0	0.00	0.00	0.0
12	146.99	0.0	0.0	0.879	23.3	0.0	0.00	0.00	0.0
13	133.24	0.0	0.0	0.802	26.8	0.0	0.00	0.00	0.0
14	71.23	0.0	0.0	1.126	72.5	0.0	0.00	0.00	0.0
15	68.18	0.0	0.0	1.083	71.4	0.0	0.00	0.00	0.0
16	68.34	0.0	0.0	1.092	71.9	0.0	0.00	0.00	0.0
17	80.42	0.0	0.0	1.109	66.3	0.0	0.00	0.00	0.0
18	102.48	0.0	0.0	0.830	40.5	0.0	0.00	0.00	0.0
19	93.19	0.0	0.0	0.943	50.4	0.0	0.00	0.00	0.0
20	79.12	0.0	0.0	0.846	51.2	0.0	0.00	0.00	0.0

Algorithm: Offline

Total Revenue: 53,666.81

Final Inventory: 0

Total Retrieved: 500.00

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining

Algorithm: Constant-Rate

Total Revenue: 47,578.32

Final Inventory: 0.0

Total Retrieved: 500.00

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
1	87.45	500.0	25.0	0.813	45.7	25.0	2186.35	0.00	475.0
2	145.07	475.0	25.0	1.055	29.0	25.0	3626.79	0.00	450.0
3	123.20	450.0	25.0	0.926	35.5	25.0	3079.98	0.00	425.0
4	109.87	425.0	25.0	1.003	45.2	25.0	2746.65	0.00	400.0
5	65.60	400.0	25.0	1.163	78.2	25.0	1640.05	0.00	375.0
6	65.60	375.0	25.0	0.900	60.5	25.0	1639.99	0.00	350.0
7	55.81	350.0	25.0	0.964	69.5	25.0	1395.21	0.00	325.0
8	136.62	325.0	25.0	1.102	34.9	25.0	3415.44	0.00	300.0
9	110.11	300.0	25.0	0.892	40.1	25.0	2752.79	0.00	275.0
10	120.81	275.0	25.0	0.831	32.9	25.0	3020.18	0.00	250.0

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
11	52.06	250.0	25.0	0.916	67.7	25.0	1301.46	0.00	225.0
12	146.99	225.0	25.0	0.864	22.9	22.9	3367.98	0.00	200.0
13	133.24	200.0	25.0	1.172	39.1	25.0	3331.11	0.00	175.0
14	71.23	175.0	25.0	1.123	72.3	25.0	1780.85	0.00	150.0
15	68.18	150.0	25.0	1.053	69.4	25.0	1704.56	0.00	125.0
16	68.34	125.0	25.0	1.149	75.6	25.0	1708.51	0.00	100.0
17	80.42	100.0	25.0	1.121	67.1	25.0	2010.61	0.00	75.0
18	102.48	75.0	25.0	0.875	42.6	25.0	2561.89	0.00	50.0
19	93.19	50.0	25.0	1.157	61.8	25.0	2329.86	0.00	25.0
20	79.12	25.0	25.0	1.016	61.4	25.0	1978.07	0.00	0.0

Algorithm: Fixed-Threshold

Total Revenue: 37,866.74

Final Inventory: 164.19196961636004

Total Retrieved: 335.81

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
1	87.45	500.0	0.0	1.123	63.2	0.0	0.00	0.00	500.0
2	145.07	500.0	27.5	1.158	31.8	27.5	3984.28	0.00	472.5
3	123.20	472.5	38.4	0.927	35.6	35.6	4386.49	0.00	434.1
4	109.87	434.1	45.1	0.844	38.0	38.0	4179.03	0.00	389.1
5	65.60	389.1	0.0	0.891	59.9	0.0	0.00	0.00	389.1
6	65.60	389.1	0.0	0.971	65.2	0.0	0.00	0.00	389.1
7	55.81	389.1	0.0	1.127	81.3	0.0	0.00	0.00	389.1
8	136.62	389.1	31.7	1.144	36.3	31.7	4329.58	0.00	357.4
9	110.11	357.4	44.9	0.803	36.1	36.1	3972.87	0.00	312.4
10	120.81	312.4	39.6	1.004	39.8	39.6	4783.53	0.00	272.8
11	52.06	272.8	0.0	0.967	71.5	0.0	0.00	0.00	272.8
12	146.99	272.8	26.5	0.889	23.6	23.6	3462.86	0.00	246.3
13	133.24	246.3	33.4	0.848	28.3	28.3	3771.16	0.00	213.0
14	71.23	213.0	0.0	0.935	60.2	0.0	0.00	0.00	213.0
15	68.18	213.0	0.0	1.177	77.6	0.0	0.00	0.00	213.0
16	68.34	213.0	0.0	0.929	61.2	0.0	0.00	0.00	213.0
17	80.42	213.0	0.0	1.008	60.2	0.0	0.00	0.00	213.0
18	102.48	213.0	48.8	1.081	52.7	48.8	4996.94	0.00	164.2
19	93.19	164.2	0.0	0.945	50.5	0.0	0.00	0.00	164.2

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
20	79.12	164.2	0.0	1.189	71.8	0.0	0.00	0.00	164.2

Algorithm: Random

Total Revenue: 33,882.28

Final Inventory: 15.69330820500721

Total Retrieved: 484.31

Period	Price	Inventory	Retrieval	δ_t	Demand	Sales	Revenue	Hold Cost	Remaining
1	87.45	500.0	144.4	0.901	50.7	50.7	4432.68	0.00	355.6
2	145.07	355.6	53.1	0.920	25.3	25.3	3666.94	0.00	302.6
3	123.20	302.6	25.9	0.815	31.3	25.9	3185.47	0.00	276.7
4	109.87	276.7	50.6	1.001	45.1	45.1	4956.64	0.00	226.1
5	65.60	226.1	3.5	0.911	61.2	3.5	229.09	0.00	222.6
6	65.60	222.6	60.7	0.896	60.2	60.2	3949.07	0.00	162.0
7	55.81	162.0	7.0	0.996	71.8	7.0	392.92	0.00	154.9
8	136.62	154.9	45.8	0.897	28.4	28.4	3882.86	0.00	109.1
9	110.11	109.1	22.0	1.105	49.6	22.0	2422.68	0.00	87.1
10	120.81	87.1	6.2	1.091	43.2	6.2	750.26	0.00	80.9
11	52.06	80.9	8.9	1.053	77.9	8.9	464.70	0.00	72.0
12	146.99	72.0	13.7	1.014	26.9	13.7	2010.80	0.00	58.3
13	133.24	58.3	1.6	1.134	37.9	1.6	210.40	0.00	56.7
14	71.23	56.7	5.5	0.875	56.3	5.5	388.81	0.00	51.3
15	68.18	51.3	0.6	1.036	68.3	0.6	42.75	0.00	50.6
16	68.34	50.6	10.3	0.807	53.1	10.3	703.36	0.00	40.3
17	80.42	40.3	6.2	0.891	53.2	6.2	498.42	0.00	34.1
18	102.48	34.1	6.6	0.870	42.4	6.6	677.20	0.00	27.5
19	93.19	27.5	5.7	0.955	51.0	5.7	531.90	0.00	21.8
20	79.12	21.8	6.1	0.855	51.7	6.1	485.33	0.00	15.7