

ICA 6: One-Time LTL Rates

ISE 453: Design of PLS Systems

Spring 2020

Answer the following questions (submitting selected answers in Moodle) using the same shipment information from the previous ICA:

Product is to be shipped from Raleigh, NC (27606) to Detroit, MI (48234). Each unit (a carton) weighs 67 lb and occupies 6 ft³, and units can be stacked on top of each other in a trailer. Next Monday, 20 units of the product are to be shipped.

1. What is the most likely freight classification for this shipment?
2. Find online one-time (spot) LTL rate quotes using the FedEx LTL website.
3. What is the rate quote for the reverse trip?
4. What is the transport cost found using the undiscounted CzarLite tariff using the undiscounted tariff given below?

**Tariff (in \$/cwt) from Raleigh, NC (27606) to Detroit, MI (48234)
(691 mi, CzarLite DEMOCZ02 04-01-2000, minimum charge = \$95.71)**

Freight Class	Rate Breaks (<i>i</i>)								
	1	2	3	4	5	6	7	8	9&10
500	370.20	307.27	233.24	188.82	134.52	97.85	50.50	50.50	50.5
400	298.34	247.63	187.97	152.17	108.41	78.86	40.77	40.77	40.77
300	228.40	189.58	143.91	116.50	83.00	60.37	31.23	31.23	31.23
250	200.17	166.15	126.12	102.10	72.74	52.91	27.38	27.38	27.38
200	155.90	129.40	98.23	79.52	56.65	41.21	21.29	21.29	21.29
175	140.51	116.63	88.53	71.66	51.06	37.14	19.16	19.16	19.16
150	120.62	100.12	76.00	61.52	43.83	31.89	16.53	16.53	16.53
125	102.66	85.20	64.67	52.36	37.31	27.13	14.10	14.10	14.10
110	89.18	74.02	56.19	45.49	32.41	23.57	12.37	12.37	12.37
100	83.41	69.23	52.55	42.54	30.30	22.05	11.56	8.96	7.79
92	78.91	65.50	49.73	40.25	28.68	20.86	11.15	8.65	7.52
85	73.14	60.71	46.08	37.31	26.58	19.34	10.75	8.33	7.24
77	68.01	56.45	42.85	34.69	24.71	17.98	10.44	8.10	7.03
70	64.16	53.25	40.42	32.72	23.31	16.96	10.14	7.86	6.83
65	61.52	51.07	38.77	31.38	22.15	16.26	10.04	7.79	6.76
60	58.90	48.89	37.11	30.04	21.22	15.57	9.94	7.70	6.69
55	55.68	46.22	35.09	28.40	20.05	14.72	9.84	7.62	6.62
50	52.48	43.56	33.07	26.77	18.88	13.87	9.73	7.55	6.56
Tons (q_i^B)	0.25	0.5	1	2.5	5	10	15	20	∞

5. What is the weight break between the rate breaks?