

**2010 \*\*BETA 4.0\*\* STUDY GUIDE RESOURCE  
 RUNNING TRAIN LISTS MATRIX as of 8/22/2010**

Question #	MCUWW 16	Loads	Empties	Car	Head Power	Rear Power	Train	Car	Head Power	Rear Power	Train
				Length	Length	Length	Length	Tons	Tons	Tons	Tons
12	Initial Departure	102	25	7963	221	162	8346	13103	624	416	14143
	s/o B/O line 29 (Cunningham Yard)	-1	0	-58			-58	-130	624	416	-130
	<b>Running Totals:</b>	<b>101</b>	<b>25</b>	<b>7905</b>	221	162	<b>8288</b>	<b>12973</b>	624	416	<b>14013</b>
34	pick up 2 hoppers (Duke)	2	0	110			110	260			260
	<b>Running Totals:</b>	<b>103</b>	<b>25</b>	<b>8015</b>	221	162	<b>8398</b>	<b>13233</b>	624	416	<b>14273</b>
53	s/o 14 cars from head end (Charlie Yard)	-14	0	-993			-993	-1440			-1440
	s/o 2 hoppers from head end (Charlie Yard)	-2	0	-110			-110	-260			-260
	<b>Running Totals:</b>	<b>87</b>	<b>25</b>	<b>6912</b>	221	162	<b>7295</b>	<b>11533</b>	624	416	<b>12573</b>
67	pickup one, 5-pack spine car (Maverick)	0	1	266			266	79			79
	<b>Running Totals:</b>	<b>87</b>	<b>26</b>	<b>7178</b>	221	162	<b>7561</b>	<b>11612</b>	624	416	<b>12652</b>

Question #	LWW67	Loads	Empties	Car	Head Power	Rear Power	Train	Car	Head Power	Rear Power	Train
				Length	Length	Length	Length	Tons	Tons	Tons	Tons
	Initial Departure	10	0	654	132	N/A	786	1248	286	N/A	1534

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Head Power EPA	Rear Power EPA	Total Power EPA	TPA RD UP	TPA RD UP	Head Power EDBA	Rear Power EDBA	Total Power EDBA	TPDBA RD UP	TPDBA RD UP	Operative Brakes	TPOB	TPOB RD UP
34.6	23.2	57.8	226.69	227	28.2	19.2	47.4	276.43	277	127	103.17	104
										-1		
34.6	23.2	57.8	224.44	225	28.2	19.2	47.4	273.69	274	126	102.96	103
										2		
34.6	23.2	57.8	228.94	229	28.2	19.2	47.4	279.17	280	128	103.38	104
										-14		
										-2		
34.6	23.2	57.8	199.53	200	28.2	19.2	47.4	243.31	244	112	104.13	105
										3		
34.6	23.2	57.8	200.89	201	28.2	19.2	47.4	244.97	245	115	100.97	101

Head Power EPA	Rear Power EPA	Total Power EPA	TPA RD UP	TPA RD UP	Head Power EDBA	Rear Power EDBA	Total Power EDBA	TPDBA RD UP	TPDBA RD UP	Operative Brakes	TPOB	TPOB RD UP
8.00	N/A	8.00	156.00	156	0.00	N/A	0.00	0.00	0	10	124.80	125

Note: When calculating **TPA/TPDBA** do not round off **EPA/EDBA** numbers used in making the calculation. After completing the calculation, if the final number is not a whole number, round up the result to the nearest whole number.

Note: Round up your train's **TPOB** to the next whole number.

- EPA** = Equivalent Powered Axles
- TPA** = Tons per Equivalent Powered Axle
- EDBA** = Equivalent Dynamic Brake Axles
- TPDBA** = Tons per Dynamic Brake Axle
- TPOB** = Tons per Operative Brake