

## 8th Grade Interdisciplinary Team Problem

You and three of your friends are going to the new amusement park in town, the Polar Expression Amusement Park. The Polar Expression Amusement Park opens at 9:00 AM and closes at 9:00 PM. It has 44 rides, seven of which are major attractions, and four water slides. You will be taking a Metro Bus to and from the Park. The bus you are taking in the morning will stop at the front entry gate of the Park at 10:04 AM and the bus you will be taking home leaves the Park at 6:27 PM.

The four of you want to spend as much time on the water slides as possible and still try to ride every ride in the park at least once. If you have any time left after going on each one of the water slides (at least once) and each ride, you want to ride the major attractions again. You will need to have lunch at one of the four restaurants, use the restrooms at least once (which will take at least 5 minutes) and change into and out of your clothes for the water slides (which will take at least 5 minutes each time). You may eat from the Snack Bars or restaurants anytime during the day. Anything you purchase from the Snack Bar or restaurants will take you at least 7 minutes to eat. You cannot take any food on any of the rides.

Using the tables of the expected wait times and ride times and the scale on the map of the park, plan out your day from the time you get off of the bus to the time you get on the bus. Measure the lengths from ride to ride by using where the diamonds touch the pathways as the entry to each ride. You may walk fast but you can't run. In your schedule, include the wait times, ride times and how long it takes to get from one place to another to show how you plan to spend your day and how you maximized the number of rides and waters slides you plan to go on. Make sure you explain and justify your answer fully.

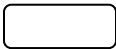
RIDE	EXPECTED WAIT		RIDE TIME	RIDE	EXPECTED WAIT		RIDE TIME	RIDE	EXPECTED WAIT		RIDE TIME	RIDE	EXPECTED WAIT		RIDE TIME
	Before 2 PM	After 2 PM			Before 2 PM	After 2 PM			Before 2 PM	After 2 PM			Before 2 PM	After 2 PM	
1	5	3	3	12	3	2	1	23	6	3	4	34	3	4	3
2	3	2	2	13	4	2	3	24	2	2	1	35	1	3	2
3	8	6	3	14	5	6	3	25	6	5	4	36	6	6	5
4	3	2	3	15	3	5	2	26	9	6	4	37	3	5	2
5	1	0	1	16	8	10	4	27	10	3	4	38	3	3	3
6	4	2	2	17	9	11	12	28	3	4	1	39	7	8	3
7	3	2	3	18	2	3	1	29	4	5	3	40	16	20	4
8	15	8	6	19	14	4	2	30	5	14	3	41	5	4	8
9	3	2	2	20	5	3	2	31	6	8	5	42	4	2	1
10	8	4	4	21	4	3	3	32	6	9	4	43	5	3	3
11	3	1	1	22	4	6	5	33	4	5	3	44	2	3	2

 Indicates Major Attraction

Water Slide 1	8	5	16	Water Slide 2	6	4	12	Water Slide 3	3	7	12	Water Slide 4	6	4	10
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Snack Bars which serve soda, water, ice cream, soft pretzels, fried dough & candied apples



Water Slide Changing Rooms & Lockers



Rest Rooms



First Aid Station

Restaurants	Waiting times(in minutes) to be served					
	10-11 AM	11-12 noon	12 – 1 PM	1-2 PM	2-3 PM	3-6 PM
Chicken BBQ	4	4	7	6	4	5
Mexican	3	5	6	5	5	3
Italian	4	6	5	8	6	4
Pizza, Hot Dogs & Hamb	5	7	8	7	8	5