Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Unit #2: Whole Number Place Value and Operations**

Performance Task: “No Time to Waste!”



HURRY! Hershey Park closes in 120 minutes! What do you have time to do before the park closes?

Your job on this Performance Task is to decide how to best use your 120 minutes. In looking only at roller coasters, which ones will you choose? How many times will you go on each coaster? How many coasters can you fit inside the time frame you are given?

In this task:

* Select a variety rides.
* Calculate the time it will take to complete each of the rides you have chosen. Consider travel time to the ride, the length of the ride, how many people are in line, and how many people can fit on each train.
* Create a schedule of the roller coasters you plan to ride before the park closes.
* Write a summary explaining your process for finding the amount of time needed to ride each roller coaster. Explain all of your steps and include at least one specific example to show how your process was applied.

**Ride Selection**

\*Important Note:

* If traveling to another region of the park, allow for 5 minutes of travel time.
* If you are staying in the same section of the park, allow for 3 minutes of travel time.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Name of Ride* | *Park Region* | *Number of People in Line* | *Number of people on each train* | *Length of Ride* |
| Fahrenheit | Pioneer Frontier | 183 | 12 | 85 seconds |
| The Comet | The Hollow | 75 | 24 | 105 seconds |
| The Great Bear | Kissing Tower Hill | 165 | 32 | 175 seconds |
| Laff Trakk | Midway America | 958 | 4  \*7 trains travel at one time | 70 seconds |
| The Lightning Racer | Midway America | 150 | 24  \*2 trains travel at one time | 140 seconds |
| Sidewinder | Pioneer Frontier | 212 | 28 | 108 seconds |
| Skyrush | The Hollow | 390 | 32 | 60 seconds |
| Sooperdooperlooper | The Hollow | 103 | 24 | 105 seconds |
| Storm Runner | Pioneer Frontier | 126 | 20 | 50 seconds |
| Trailblazer | Pioneer Frontier | 35 | 30 | 75 seconds |
| Wild Mouse | Midway America | 88 | 4  \*10 trains travel at one time | 118 seconds |
| Wildcat | Midway America | 77 | 24 | 85 seconds |

**Work Space:**

Use the provided space for mathematical calculations and problem solving.

**My Schedule:**

Place your final schedule below. Write all of your time amounts **in minutes**.

|  |  |  |
| --- | --- | --- |
|  | **Roller Coaster Name** | **Estimated Time** |
| 1 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 2 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 3 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 4 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 5 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 6 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 7 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 8 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 9 |  |  |
| Travel time: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| 10 |  |  |

**“No Time to Waste!” Scoring Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Primary Criteria** | | | | |
|  | **Advanced** | **Proficient** | **Basic** | **Below Basic** |
| **Number Models and Evidence of Strategies and Process** | Always writes true numerical equations for calculating time available and time used for each ride.  Always includes appropriate labels/units. | Mostly writes true numerical equations for calculating time available and time used for each ride.  Mostly includes appropriate labels/units. | Sometimes writes true numerical equations for calculating time available and time used for each ride.  Labels/units are occasionally included and/or appropriate. | Unable to write numerical equations for calculating time available and time used for each ride.  Labels/units are rarely included and/or appropriate. |
| **Applies Operations to Real World Situations** | Strong understanding of applying operations to real world situations.  Proves mathematically that all rides will fit into the time frame available.  Considerations are made for travel, number of people in line, and length of ride.  Little time is left unused. | Solid understanding of applying operations to real world situations.  Proves mathematically that all rides will fit into the time frame available.  Considerations are made for travel, number of people in line, and length of ride. | Some understanding of applying operations to real world situations.  Proves mathematically that all rides will fit into the time frame available; however, some calculations were inaccurate.  Minor errors in solving may exist.  All rides do not fit into the time available. | Limited understanding of how operations are used in the real world.  There is little to no math to support that the rides planned will fit into the time available. |
| **Appropriate and Accurate Conversions** | Strong understanding of converting units.  Conversions between units are always accurate. | Solid understanding of converting units.  Conversions between units are mostly accurate. | Some understanding of converting units.  Minor errors in conversions may exist.  Not all numbers are converted appropriately. | Limited understanding of converting units.  There is little to no evidence of conversions being made or being made accurately. |
| **Requirements** |  | A schedule is given in which there is a variety of rides included. Students stay within the 90 minutes of available time. All rides are selected from the ride list. | A schedule is given that meets only one or two out of the three requirements. | A schedule is given that does not meet any of the requirements. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Secondary Criteria: Written Summary** | | | | |
|  | **Advanced** | **Proficient** | **Basic** | **Below Basic** |
| **Content/Purpose** | Summary includes clear explanation of the process used to determine the amount of time needed for each ride.  At least one clear example is given to support the use of their process. | Summary includes a mostly clear explanation of the process used to determine the amount of time needed for each ride.  An example is given to support the use of their process. | Summary includes a somewhat clear explanation of the process used to determine the amount of time needed for each ride.  An example is given to support/show the use of their process.  Summary or example is missing important information or steps. | An unclear summary is included that does little to explain the process they used to determine the time needed for each ride.    An example is not included with their summary or does not show how their process was used. |
| **Conventions** | * All sentences have an end punctuation mark. * The start of all sentences and proper nouns are capitalized. | Some errors are present in capitalization and end punctuation. | Many errors are present in capitalization and end punctuation. | Significant errors are present in capitalization and end punctuation. |