**Student: A**

| **Criteria** | **Performance Level**  **(Advanced, Proficient, Developing, Emerging)** | **Rationale** |
| --- | --- | --- |
| Mathematical **Understanding** | Proficient | * The student demonstrates an understanding of elapsed time. * The student applies the use of a t-chart which leads to a valid solution of Bus A’s elapsed time (12 hrs and 27 min.). |
| Problem Solving | Proficient | * The student displays an understanding of elapsed time by correctly determining Bus A as the shorter trip through the use of a t-chart. * The student confirmed the reasonableness of their choice by subtracting the difference in minutes of both trips. |
| **Communication**  **and**  **Reasoning** | Advanced | * The student made an estimation of Bus B’s route which shows a more comprehensive understanding of the problem. The student communicated that Bus B is almost 13 hours and that 12 hours and 27 minutes is less time. The student writes that Bus A would get you there faster. |
| **Representations**  **and**  **Connections** | Proficient | * The student uses a t-chart representation to explore the elapsed time. The t-chart is accurately labeled with hours, minutes, am and pm. * The student could move to a score of Advanced by labeling and explaining what the subtracted difference of 26 meant in the problem. |

**Student: B**

| **Criteria** | **Performance Level**  **(Advanced, Proficient, Developing, Emerging)** | **Rationale** |
| --- | --- | --- |
| Mathematical **Understanding** | Advanced | * The student used the 12-hour relationship of am and pm to determine the elapsed time of Bus A demonstrating a deeper understanding. The student also found the exact difference between trips. |
| Problem Solving | Advanced | * The student’s t-chart strategy was well efficient. The student captured a greater chunk of time by using the 12-hour relationship of am to pm. |
| **Communication**  **and**  **Reasoning** | Advanced | * The student demonstrated and justified their reasoning for choosing Bus A by finding the 26-minute difference in elapsed time between the two buses. * The student consistently used precise mathematical language (hours, minutes, shorter, longer) to communicate their thinking. |
| **Representations**  **and**  **Connections** | Proficient | * The student used a t-chart with accurate labels as a representation of the problem. * The student could move to a score of Advanced by recording a mathematical connection between the t-chart and their solution. |

**Student: C**

| **Criteria** | **Performance Level**  **(Advanced, Proficient, Developing, Emerging)** | **Rationale** |
| --- | --- | --- |
| Mathematical **Understanding** | Emerging | * The student demonstrated no understanding of elapsed time. The student added the start and end times. The student did not denote am or pm. The student chose Bus A but gave no reason. |
| Problem Solving | Emerging | * The student’s strategy of adding the end and start time together did not produce a solution that is relevant to the problem. |
| **Communication**  **and**  **Reasoning** | Emerging | * The student chose Bus A but did not provide reasoning. * The student does not provide evidence to support their choice. * The student did not use any mathematical language to communicate their thinking. |
| **Representations**  **and**  **Connections** | Emerging | * The student used a representation of adding the end and start time of Bus A but it does not model the elapsed time situation. * The student makes no mathematical connections. |

**Student: D**

| **Criteria** | **Performance Level**  **(Advanced, Proficient, Developing, Emerging)** | **Rationale** |
| --- | --- | --- |
| Mathematical **Understanding** | Proficient | * The student demonstrated an understanding of elapsed time by creating a number line showing the elapsed time of Bus A. * The student applied a number line strategy to support their choice of Bus A. Their strategy led to a valid and correct solution of the elapsed time. |
| Problem Solving | Proficient | * The student’s use of a number line displays an understanding of the elapsed time situation. * The student produced a correct solution that is relevant to the problem by finding the exact difference between the two bus routes. |
| **Communication**  **and**  **Reasoning** | Advanced | * The student supported their choice with reasoning and consistently used precise mathematical language (hours, minutes, difference, time) to communicate their thinking. |
| **Representations**  **and**  **Connections** | Advanced | * The student used a number line with a key denoting 1 hour, 10 minutes, and 1 minute increments to represent their thinking. The student used an equation to represent the difference in time between the two buses. |

**Student: E**

| **Criteria** | **Performance Level**  **(Advanced, Proficient, Developing, Emerging)** | **Rationale** |
| --- | --- | --- |
| Mathematical **Understanding** | Proficient | * The student demonstrated an understanding of the elapsed time task by correctly determining the elapsed time of Bus A. * The student applied a counting up strategy of hours and minutes which led to a valid and correct solution. |
| Problem Solving | Proficient | * The student used a counting up strategy to display an understanding of elapsed time. * The student produced a relevant solution of Bus A’s elapsed time and explained that Bus B is longer. |
| **Communication**  **and**  **Reasoning** | Developing | * The student’s reasoning is limited to communicating that Bus B’s trip is longer without explanation of how. The student communicates counting in minutes but actually counted in hours. * The student used limited mathematical language (minutes, hours, longer) to communicate their thinking. |
| **Representations**  **and**  **Connections** | Developing | * The student partially modeled elapsed time with a list of elapsed hours and minutes. * The student could move to a score of Proficient by labeling both the hours and minutes used to determine the elapsed time. |

**Student: F**

| **Criteria** | **Performance Level**  **(Advanced, Proficient, Developing, Emerging)** | **Rationale** |
| --- | --- | --- |
| Mathematical **Understanding** | Proficient | * The student demonstrated an understanding of elapsed time by creating a number line to represent the elapsed time situation. * The student applied the result of their number line to make a choice of Bus B. Their number line strategy led to a valid solution. |
| Problem Solving | Advanced | * The student used the number line to efficiently solve the problem by making jumps of greater quantities. * The student confirmed the reasonableness of the solution by determining the exact difference in route times. |
| **Communication**  **and**  **Reasoning** | Advanced | * The student’s reasoning was comprehensive. The student reasoned that Bus B was the better choice because it would take 26 more minutes and the student liked long bus rides. * The student used consistent and precise mathematical language (am, pm, minutes, difference) to communicate their thinking. |
| **Representations**  **and**  **Connections** | Proficient | * The student represented the problem with a number line. The number line is labeled accurately with times in am and pm. The increments were clearly marked and the total time was recorded. |