**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_**

**U8 CW #5** *From Stories to Graphs and Graphs to Stories*

**Directions:** Sketch a graph to match each of the following stories. Label key features of your graph.

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| --- | --- |
| **Story** | **Graph** |
| 1. Zach walks home from school each day. Sketch a graph of Zach’s distance from school as a function of time since the bell rang if the following happens: When the bell rings, Zach runs to his locker to grab his books and starts walking home. When he is about halfway home, he realizes that he forgot his math book so he turns around and runs back to school. After retrieving his math book, he realizes that he is going to be late so he sprints home. |  |

1. A concert for a popular rock group is sold out. The arena holds 8,000 people. The rock group is scheduled to take the stage at 8 pm. A band that is not very well known is opening for the rock band at 6:30 pm. The rock band is scheduled to play for 2 hours and the staff working the concert have been told that the arena must be cleared of people by 11:30 pm. Sketch a graph of the number of people in the arena from 5 pm to midnight. Time 0 on the grid below is 5 pm.



1. Your science teacher has the beakers shown below. He is going to fill them with water from a faucet that runs at a constant rate. Your job is to sketch a graph of the height of the water in each of the beakers over time.

|  |  |
| --- | --- |
| **Beaker** | **Graph of the height of the water over time** |
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1. Ben and his family took a road trip to visit their cousins. The graph below shows their journey. Label the key features of the graph.
   1. Tell the story of the graph.
2. Jorge is the team captain of his soccer team. He would like to order shirts for the team and is looking into how much it will cost. He called Custom T’s to ask about pricing and the manager sent him the following graph.



* 1. Tell the story of the graph.

1. A boat is anchored near a dock. The graph below shows the distance from the bottom of the boat to the sea floor over a period of time.



* 1. Tell the story of the graph.

1. The graph below shows the amount of gas remaining in a vehicle over time.
   1. Tell the story of the graph.