Matching Qualitative Graphs to Story Scenarios

Four original tasks / complete practice workshop

Name: _____ Date: _____

Task 1: Story: A candle is lit and burns steadily for 6 minutes, stays at the same height for 1 minute because the flame is shielded, then burns steadily again for 3 minutes. Describe the segment sequence of the qualitative graph of candle height versus time.

Task 2: Story: A runner jogs at a steady speed for 4 minutes, sprints faster for 2 minutes, then walks slowly for 5 minutes. The graph shows speed versus time. Describe the segment sequence and relative steepness.

Task 3: Story: A water tank starts half full. It fills for 3 minutes, stays full for 2 minutes, then drains for 4 minutes until empty. The graph shows water level versus time. Describe the segment sequence and the starting level.

Task 4: Story: A hiker climbs for 2 minutes, rests for 3 minutes, climbs faster for 1 minute, then descends for 4 minutes. The graph shows elevation versus time. Describe the segment sequence and identify which rise is steeper.

Quick check / tick after your attempt

- ☐ Graph is divided into segments at every change of direction.
- ☐ Each segment is labeled rise, fall, or plateau.
- ☐ The sequence of segments matches the order of events in the story.
- ☐ Relative steepness is used only when the story gives comparative speed or rate information.
- ☐ Starting and ending behavior are consistent with the story.
- ☐ Sketch follows the baseline-midline convention and is clear enough to read.
- ☐ Valid alternative sketches with the same segment sequence are accepted when the story does not specify relative steepness.

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Exercise 1 response space

Student writes the segment sequence for the candle story.

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Exercise 2 response space

Student writes the segment sequence and relative steepness for the runner story.

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Exercise 3 response space

Student writes the segment sequence and starting level for the water tank story.

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Exercise 4 response space

Student writes the segment sequence and identifies the steeper rise for the hiker story.