Can a Graph Tell You Who Won?

A fresh set of rates, interval speeds, averages, and distance-time stories. Same beetle logic, new numbers.

[unit rates] [distance-time graphs] [averages] [QUESTIONS ONLY] [PRINT-FRIENDLY]

NAME	PERIOD	DATE

QUESTIONS ONLY - Practice independently or with a group. Use the class sheet as a model, but solve these numbers yourself.

PART A Interval speed

A beetle moves from 0.0 cm to 2.4 cm in 2 s, then to 5.0 cm in the next 2 s, then to 5.4 cm in the next 2 s.

1. Find the speed for each interval in cm/s. During which interval was it fastest?

2. Find the average speed for the full 6 s. Why is it different from each interval speed?

PART B Unit-rate showdown

Runner A travels 84 m in 14 s. Runner B travels 60 m in 12 s.

1. Find both speeds in m/s. Who is faster?

2. A snail travels 18 cm in 90 s. Convert its speed to cm/s and compare it with a beetle moving 0.4 cm/s.

PART C Split times

A runner covers three 10 m chunks in 1.8 s, 1.2 s, and 1.0 s.

1 Find the speed for each chunk to the nearest tenth of a meter per second.

2 What does the change in speed suggest about the runner's motion? Use acceleration in your answer.

PART D Draw the story

A student walks 30 m from home in 5 min, waits 2 min, then walks back 10 m toward home in 2 min.

1 Sketch the distance-from-home graph. Label the three segments.

2 Which segment is flat? Which segment has the greatest speed?