

# 1 Motion

Worksheet B: Interpreting Motion Graphs

Name \_\_\_\_\_

Inquiry Physics

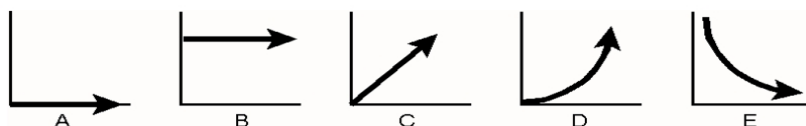
- Identify the physical meaning of the slope of a distance vs. time graph.

\_\_\_\_\_

- Identify the physical meaning of the slope of a speed vs. time graph.

\_\_\_\_\_

Questions 3 - 8 refer to the following generic graph shapes. Write the letter corresponding to the appropriate graph in the blank at the left of each



question.

- Which shape fits a **distance** vs. time graph of an object moving at constant (non-zero) speed?

- Which shape fits a **speed** vs. time graph of an object moving at constant (non-zero) speed?

- Which *two* shapes fit a **distance** vs. time graph of a motionless object?

- Which shape fits a **speed** vs. time graph of a motionless object?

- Which shape fits a **distance** vs. time graph of an object that is speeding up at a steady rate?

- Which shape fits a **speed** vs. time graph of an object that is speeding up at a steady rate?

- Which of the following units is equivalent to meters per second per second?  
a) m                      b) m/s                      c) m/s<sup>2</sup>                      d) m/s<sup>3</sup>

- Which of the following units correspond to the slope of a distance vs. time graph?  
a) m                      b) s                      c) m/s                      d) m/s<sup>2</sup>

- Which of the following units correspond to the slope of a speed vs. time graph?  
a) m/s                      b) m/s<sup>2</sup>                      c) m/s<sup>2</sup>                      d) m<sup>2</sup>/s<sup>2</sup>

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