



1. Consider an object moving with positive constant velocity.

a) Circle the letters of all the graphs that could represent the position vs. time for this object.

A B C D E F G H I J None of these

b) Circle the letters of all the graphs that could represent the velocity vs. time for this object.

A B C D E F G H I J None of these

2. Consider an object moving with negative constant acceleration.

a) Circle the letters of all the graphs that could represent the position vs. time for this object.

A B C D E F G H I J None of these

b) Circle the letters of all the graphs that could represent the velocity vs. time for this object.

A B C D E F G H I J None of these

For each question below, your solution must show work/calculations and display/explain your reasoning.

3. A particle initially moving at 5 m/s in a straight line begins to accelerate at -2 m/s^2 . After it travels 1 m with this acceleration, how fast is it going?

4. A toy rocket launched from the ground takes 4 seconds to travel straight up and down. Your goal is to determine the maximum height above ground that the rocket reaches. Neglect air resistance.

a) Write down all the relevant information you know or can infer from the problem statement and the rocket's motion that will help you to determine the rocket's maximum height above the ground.

b) Determine the maximum height above ground that the rocket reaches (neglecting air resistance).