Clicker Questions for Forces and Motion Activity 2

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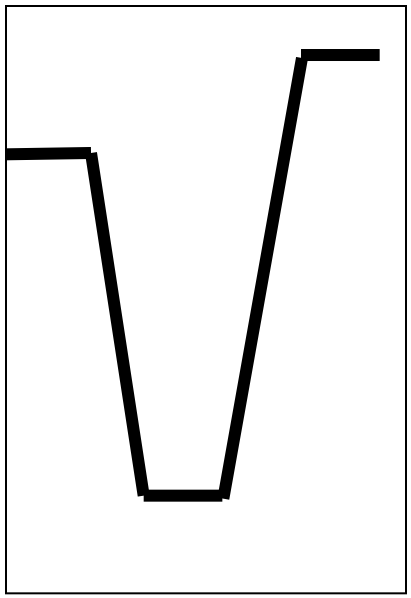
Learning Goals:

Students will be able to:

- **Use free body diagrams to draw position, velocity, acceleration and force graphs and vice versa**
- **Explain how the graphs relate to one another.**
- **Given a scenario or a graph, sketch all four graphs**

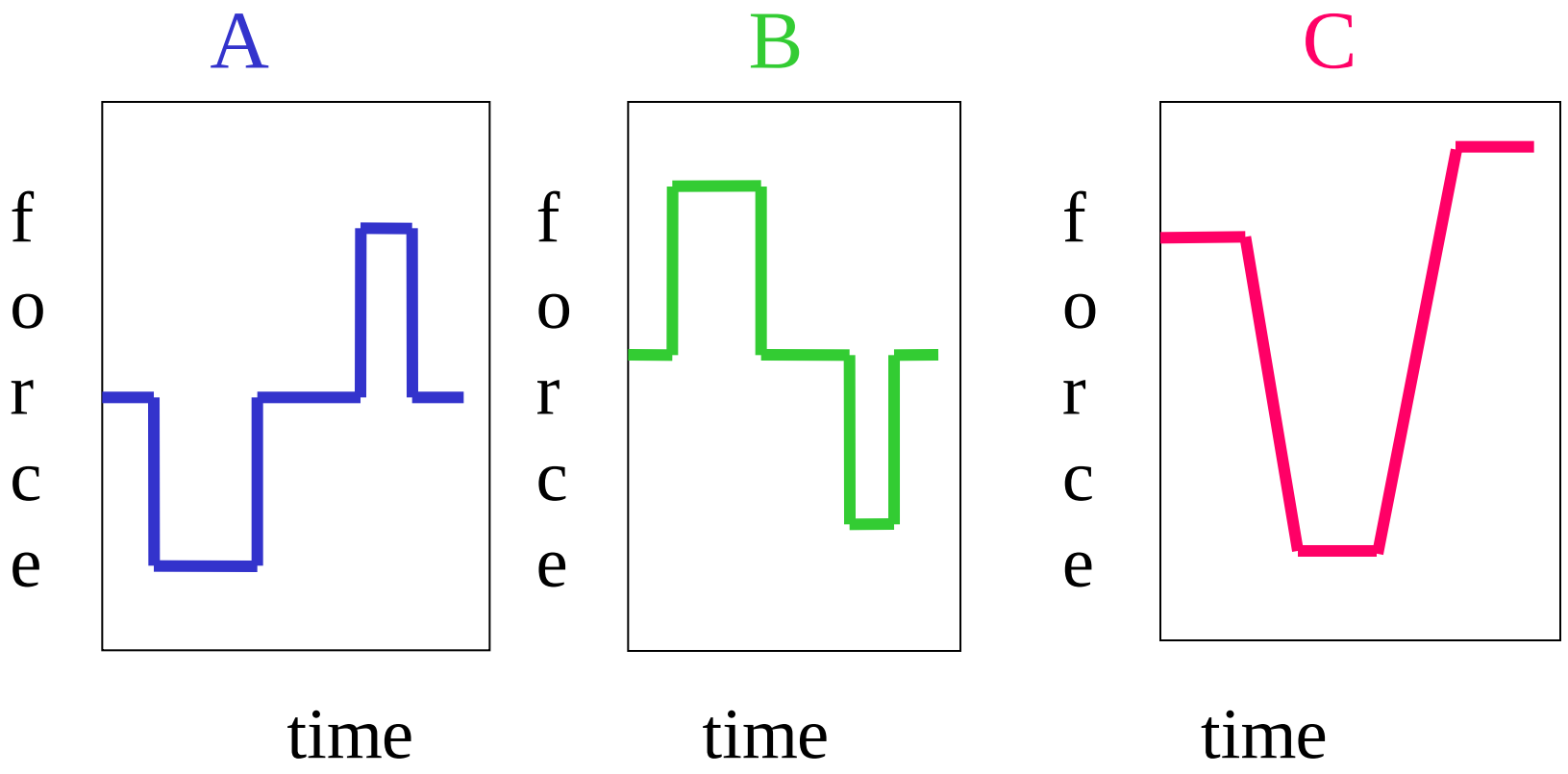
1. A car is traveling along a road. Its acceleration is recorded as a function of time.

acceleration

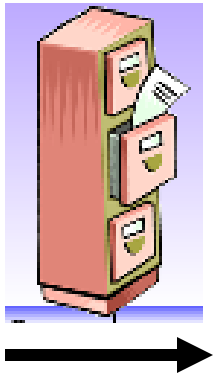


time

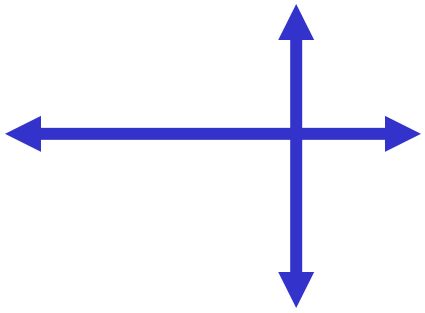
1. Which **<u>Total</u> force-time** graph would best match the scenario?



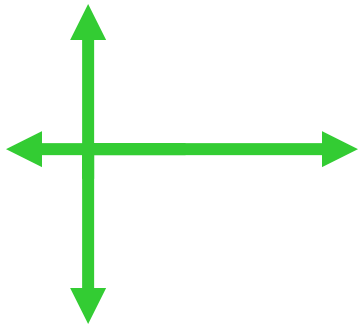
2. A cabinet is speeding up as it slides right across the room. Which of the following is a possible free body diagram?



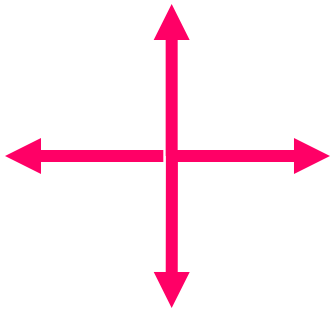
A



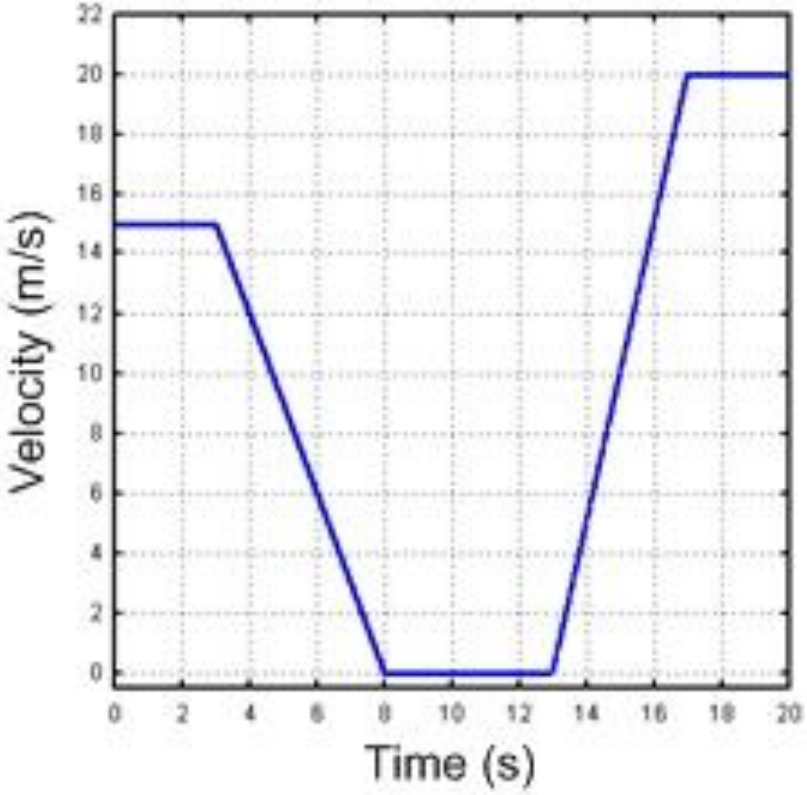
B



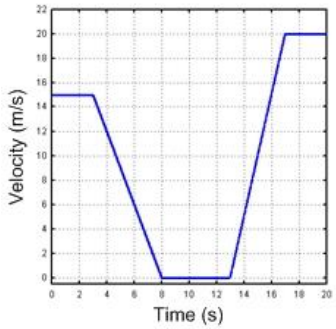
C



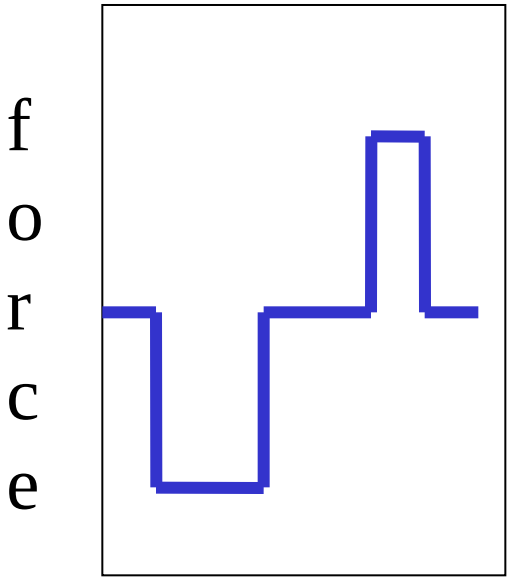
3. A car is traveling along a road. Its velocity is recorded as a function of time.



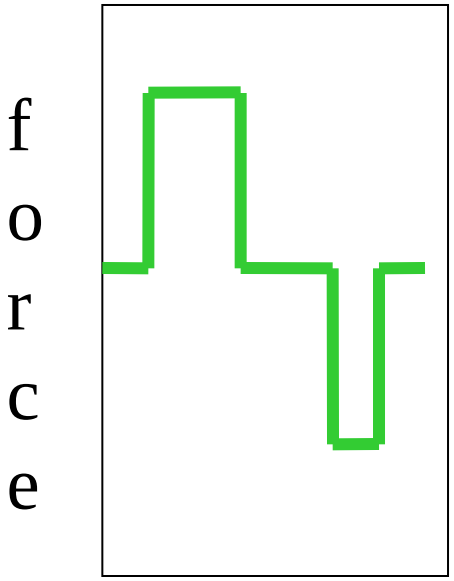
3. Which would be the **Total force-time** graph?



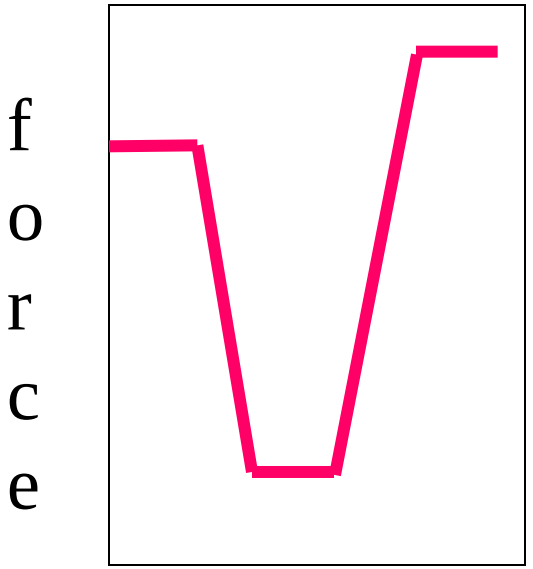
A



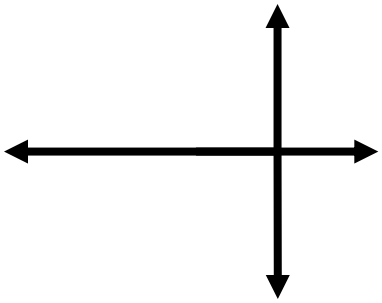
B



C



4. A car is moving towards the right. Then a force is applied and the free body diagram looks like this



Force diagram

Draw what you think the ***position-time*** graph would look like.

4. Which ***position-time*** graph best matches your idea?