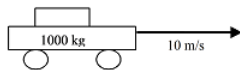


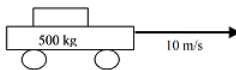
## I-114

Below are six automobiles initially traveling at the indicated velocity. The automobiles have different masses and velocities.

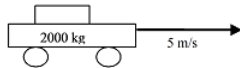
**A**



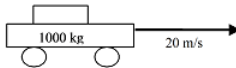
**B**



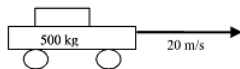
**C**



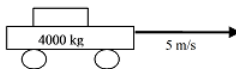
**D**



**E**



**F**



a. Rank these automobiles on the basis of the magnitude of the force needed to stop them.

Largest 1. \_\_\_\_ 2. \_\_\_\_ 3. \_\_\_\_ 4. \_\_\_\_ 5. \_\_\_\_ 6. \_\_\_\_ Smallest

\_\_\_\_ The ranking can not be determined based on the information provided.

Explain the reason for your ranking:

b. Rank these automobiles on the basis of the magnitude of the work needed to stop them.

Largest 1. \_\_\_\_ 2. \_\_\_\_ 3. \_\_\_\_ 4. \_\_\_\_ 5. \_\_\_\_ 6. \_\_\_\_ Smallest

\_\_\_\_ The ranking can not be determined based on the information provided.

Explain the reason for your ranking:

c. Rank these automobiles on the basis of the magnitude of the impulse needed to stop them.

Largest 1. \_\_\_\_ 2. \_\_\_\_ 3. \_\_\_\_ 4. \_\_\_\_ 5. \_\_\_\_ 6. \_\_\_\_ Smallest

\_\_\_\_ The ranking can not be determined based on the information provided.

Explain the reason for your ranking:

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