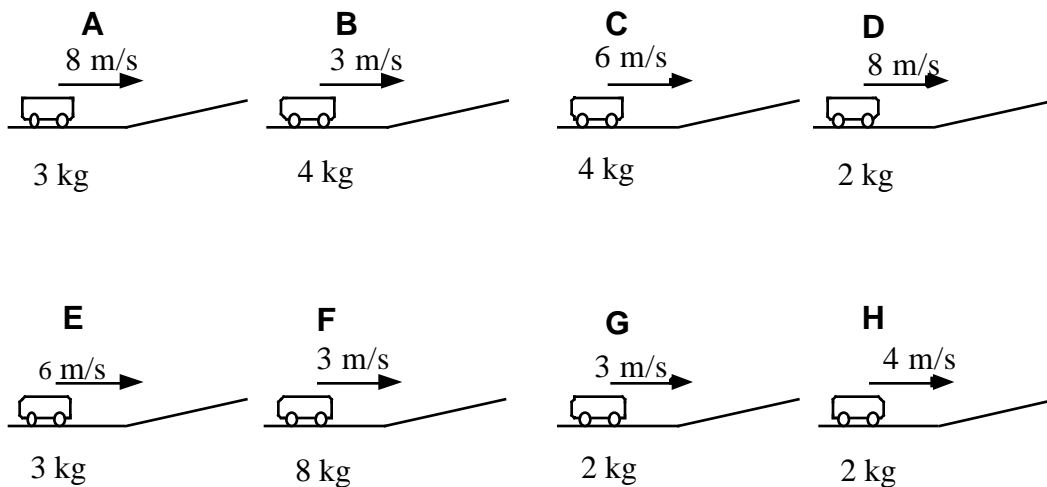


Carts on Incline—Height After Leaving Incline ⁵³

Shown below are diagrams of situations where carts, initially moving along a horizontal surface, run up onto short inclines. The carts go up off the inclines. All of the inclines have the same angle, and they are very smooth, so there is essentially no friction. The masses of the carts and their speeds when they reach the inclines are given in the figures.

Rank the situations in order of how high the carts go after leaving the incline. That is, order the situations from the one where the cart goes highest (greatest vertical distance) to that where the cart goes lowest.



Highest 1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_____ 8_____ Lowest

Or, all of the carts reach the same height. _____

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed

Sure

Very Sure

1

2

3

4

5

6

7

8

9

10

⁵³ D. Maloney