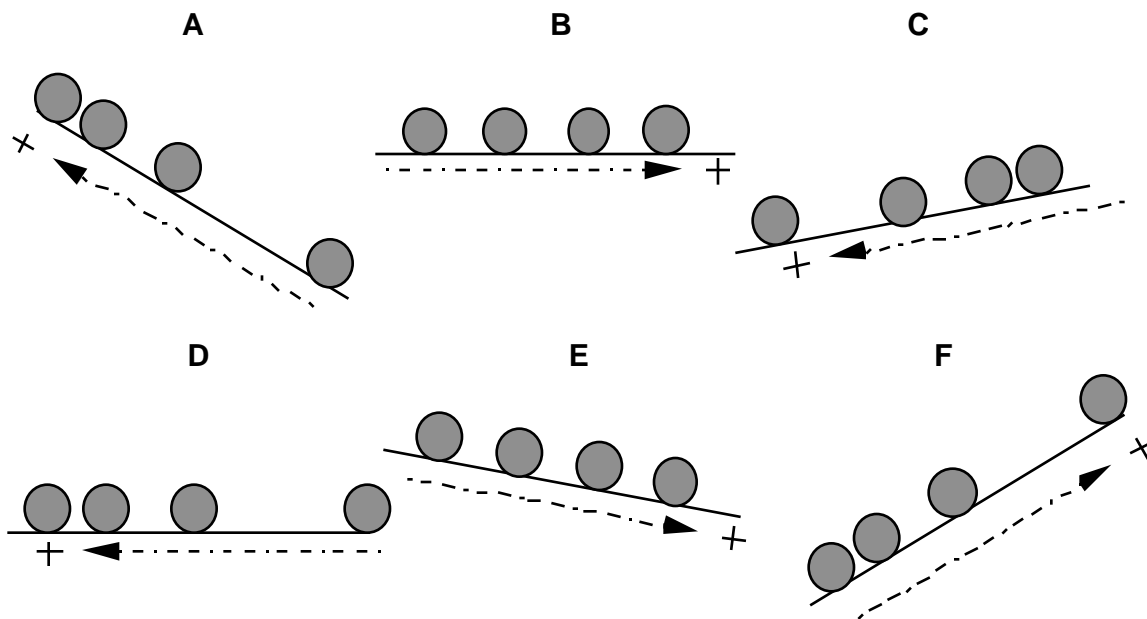


Ball Motion Diagrams—Acceleration II⁴

The following drawings indicate the motion of a ball subject to one or more forces on various surfaces from left to right. Each circle represents the position of the ball at succeeding instants of time. Each time-interval between successive positions is equal.

Rank each case from the highest to the lowest acceleration, based on the drawings. Assume all accelerations are constant and use the coordinate system specified in the drawing. Note: Zero is greater than negative acceleration, and ties are possible.



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

Or, all have the same acceleration. _____

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

⁴ D. Schramme, C. Fang, B. Speers, C. Hieggelke, D. Maloney, T. O’Kuma
Physics Ranking Tasks