Exam I Review.

RI-1 How many μV (microvolts) in one kV (kilovolt)?

A) 1000 B) 10^5 C) 10^6 D) 10^9 E) None of these.

RI-2 A calculator question: $\mathbf{10^5}$ = ?

A) 1E5 B) 10E5 C) something else.

RI-3 A ball is thrown upward at an initial velocity v_0. Which formula should you use to determine the maximum height of the ball?

(A) $v = v_o + at$

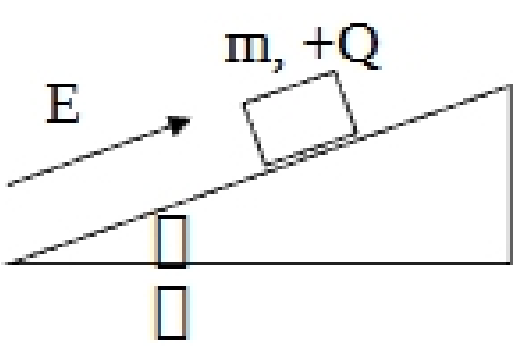
(B) $x = x_o + v_o t + (1/2)at^2$

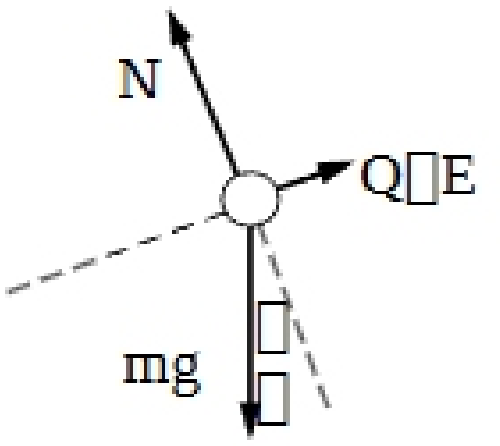
(C) $v^2 = v_o^2 + 2a(x - x_o)$

(D) None of these will help answer the question.

RI-4 A box of mass m and net charge Q is on a frictionless plane inclined at angle □. What is the magnitude of the electric force, F = QE, necessary to keep the box from sliding down the incline?

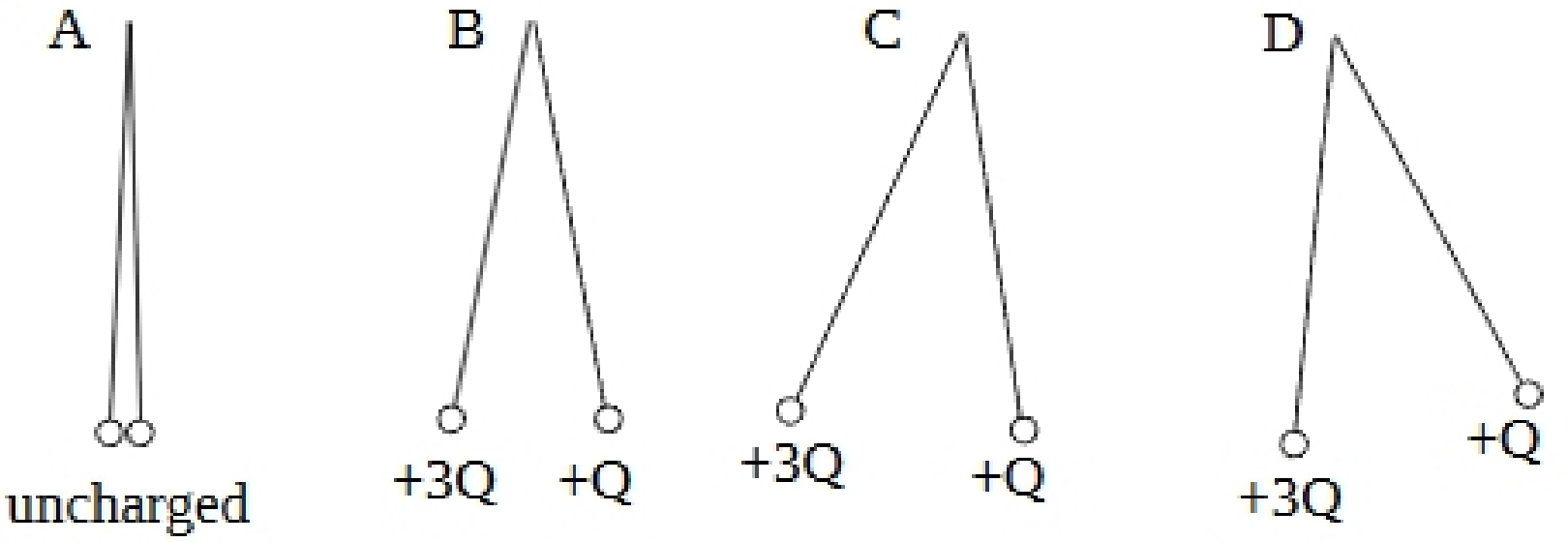
A) Not enough info given to answer the question.
B) mg
C) mg /cos□
D) mg sin□
E) mg/ sin□



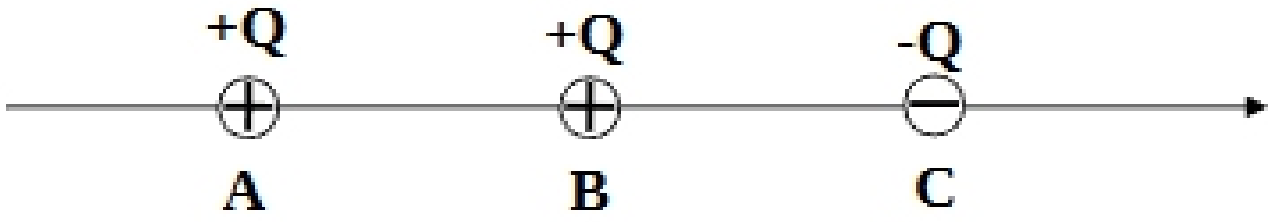


RI-5 Does the magnitude of the normal force N depend on the magnitude of the E-field?
A) Yes B) No

RI-6 Two pith balls, each of mass m, are suspended by light strings from the same pivot point. The two balls are each positively charged, so they repel. The left ball has a larger charge of +3Q, while the right ball has a smaller charge of +Q. Which figure most accurately shows the equilibrium positions of the charged pith balls?

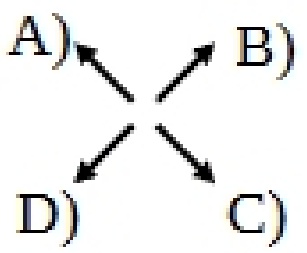


RI-7 Three equal mass charges are released from rest at the positions shown on the x-axis. Which mass has the largest initial acceleration?

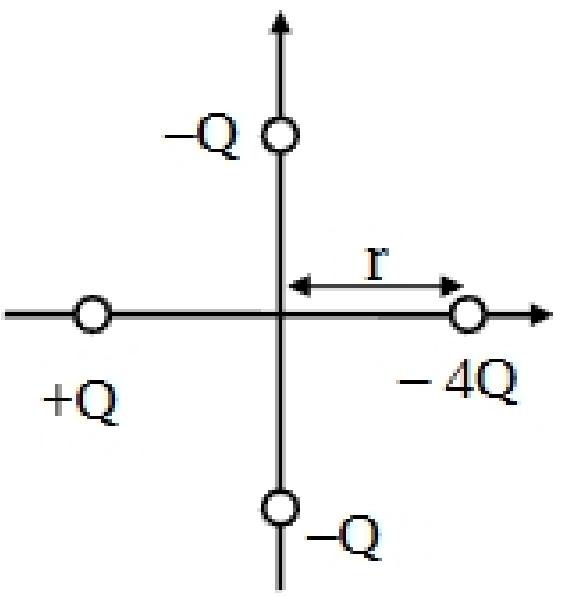


A) A B) B C) C
D) 2 of the masses have the same acceleration.
E) Some other answer.

RI-8 Four charges are arranged as shown, all a distance r from the origin. What is the direction of the E-field?



E) None of these



RI-9
What is the magnitude of the E-field at the origin, in units of kQ/r^2?
A) 2 B) 3 C) 4 D) None of these.