Math 20E

September 4, 2014

Question 1 Suppose $\mathbf{F}$ is a conservative vector field on $\mathbb{R}^3$. Then,

A. $\nabla \cdot \mathbf{F} = k$ for some constant k.

B. $\int_C \mathbf{F}{\cdot}d\mathbf{s} = 0$ along every oriented simple closed curve C.

C. $\nabla \times \mathbf{F} = \mathbf{0}$

D. There is a scalar function $f : \mathbb{R}^3 \to \mathbb{R}$ for which $\mathbf{F} = \nabla f$

****E.** **B**, **C** and **D**

Question 2 The use of clickers in this course was

A. Very helpful for reviewing the important conceptual ideas of the subject.

B. An easy way to earn extra credit.

C. A fun way to start each class period.

D. The way the professor encouraged me to get to class on time.

E. A complete waste of time.