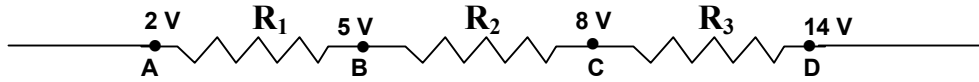


Physics 112
Quiz #9
September 29, 2000

Name: _____

A section of a circuit is shown below; there is a steady flow of current in this circuit. The potential is indicated at the points A, B, C and D. All four questions refer to this diagram.



1. If x coulombs of charge flow past point C each second, then how many coulombs of charge flow past point B each second?
 - A. x coulombs.
 - B. More than x coulombs.
 - C. Less than x coulombs, but not zero.
 - D. Could be more or less than x coulombs, depending on what the rest of the circuit looks like.
 - E. zero coulombs.
2. Which of the following is the correct ranking of the resistances?
 - A. $R_1 > R_2 > R_3$
 - B. $R_1 > R_2 = R_3$
 - C. $R_1 = R_2 > R_3$
 - D. $R_3 > R_2 > R_1$
 - E. $R_3 = R_2 > R_1$
 - F. $R_3 > R_2 = R_1$
3. If R_3 is a 2-ohm resistor, then how much current is flowing past point B?
 - A. 1 A
 - B. 2 A
 - C. 3 A
 - D. 4 A
 - E. 5 A
 - F. 6 A
 - G. 8 A
 - H. 9 A
 - I. There is not enough information to determine the current flowing past point C.
4. At which point in this segment would the moving positive charges have the *smallest* potential energy?
 - A. Point A.
 - B. Point B.
 - C. Point C.
 - D. Point D.
 - E. They would have the same potential energy at all four points.
 - F. There is not enough information to answer this question.