

Physics 102-Rec
Quiz #7
Chapter 28

Date: 14 May 2002

Name: _____

Id: _____

Sect: _____

Consider the circuit shown in the figure. Calculate:

(a) The current in the $10\ \Omega$ resistor.

The resistance between points a and b is infinite.

\Rightarrow no current in the $10\ \Omega$ resistance

$$\boxed{I = 0}$$

(b) The current in the $6\ \Omega$ resistor.

$$24 = 12 I \Rightarrow I = 2\text{ A}$$

$$\boxed{I_{6\ \Omega} = 2\text{ A}}$$

(c) The potential difference $V_b - V_a$.

$$V_b - V_a = 4 - 4 \times 2 = \boxed{-4\text{ V}}$$

