

Physics 102Rec

Quiz # 8

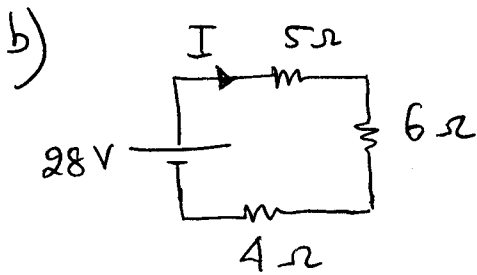
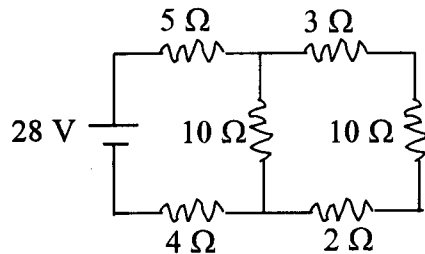
Chapter 28

Name: Key Id#: \_\_\_\_\_ Sect#: \_\_\_\_\_

Consider the circuit shown in the figure.

- (a) What is the power dissipated in the circuit?  
 (b) Determine the potential difference across the 5 Ω resistor.

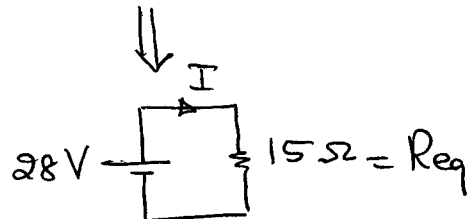
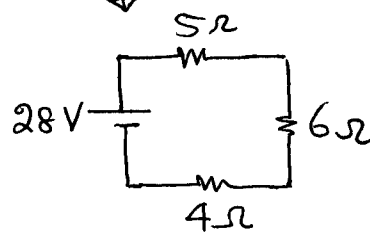
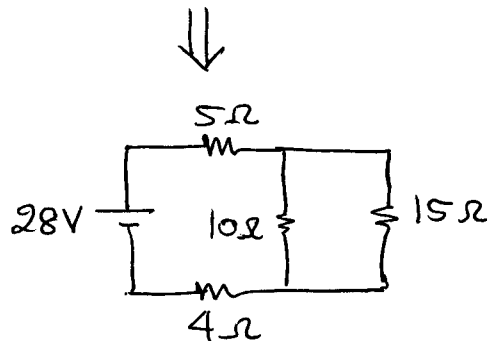
a)  $P = I^2 R = (1.87)^2 (15)$   
 $P = 52.3 \text{ W}$



$I = 1.87 \text{ A}$

The current in the 5 Ω resistor is 1.87 A.

$\Rightarrow V_{5\Omega} = IR = (1.87)(5)$   
 $= 9.35 \text{ V}$



$I = \frac{V}{R_{eq}} = \frac{28}{15}$

$I = 1.87 \text{ A}$