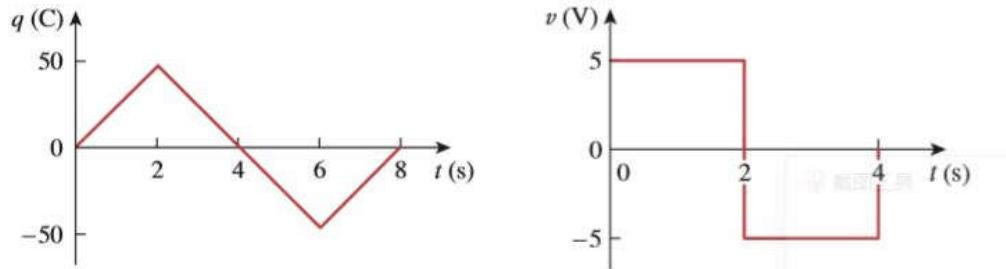


# VE215 Quiz #1

Chapters 1-3 are covered in this quiz.

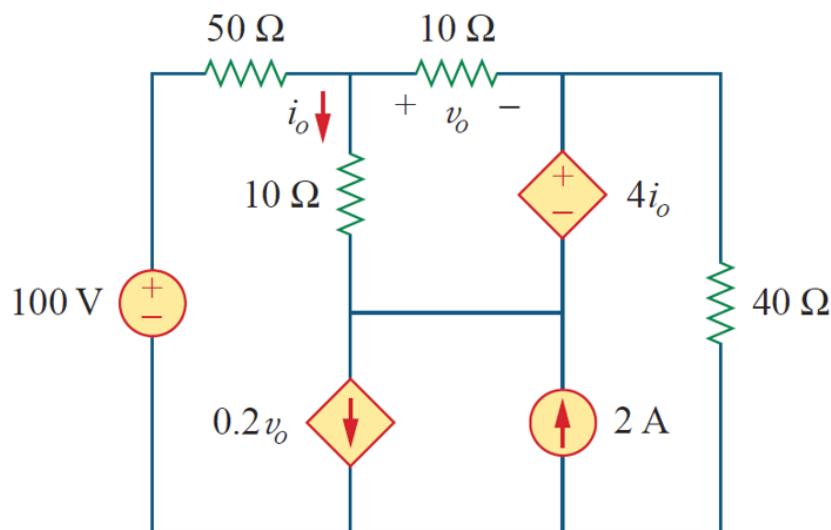
## Problem #1



The function diagrams above shows the charge  $q$  pass through and the voltage  $V$  across an ideal active circuit element.

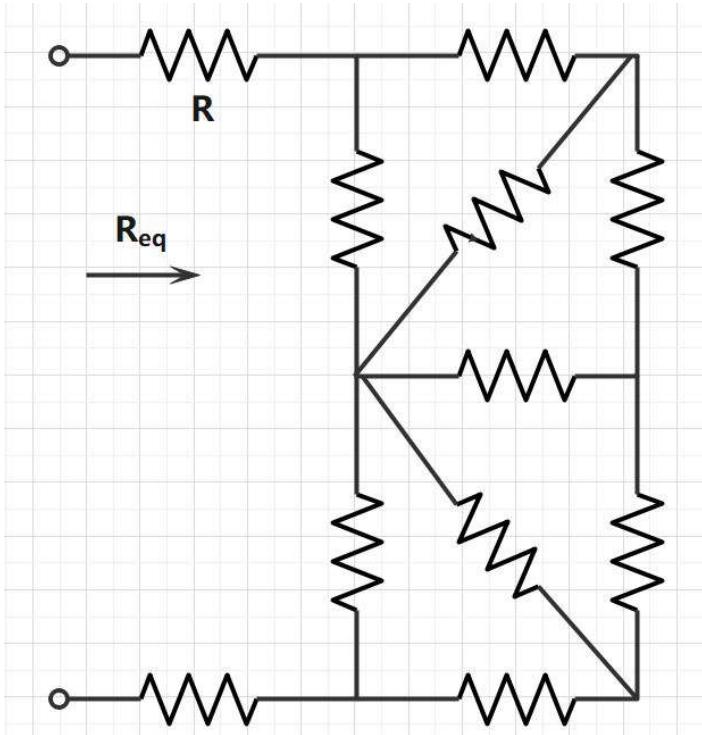
- (1) Please sketch the curve represent the current through the element from 0s~4s.
- (2) Please calculate the energy absorbed by the element from 0s~4s.

## Problem #2



Find  $v_o$  and  $i_o$  in the circuit above using mesh analysis..

### Problem #3



Please derive the equivalent resistance of the circuit above. Each resistor has a resistance of  $R$ .