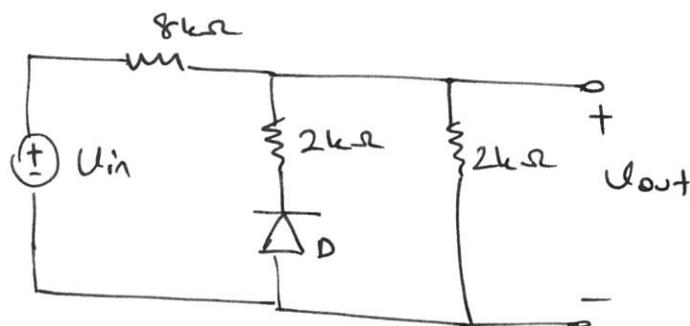


Problem 1

Consider the following circuit and find:

- $U_{out}$  vs.  $U_{in}$  characteristics (expressions for PWL characteristics)
- Sketch  $U_{out}$  vs.  $U_{in}$  showing all intersections, breakpoints, slopes, etc.
- Sketch  $U_{out}$  and  $U_{in}$  if  $U_{in} = A \sin(\omega t)$ .

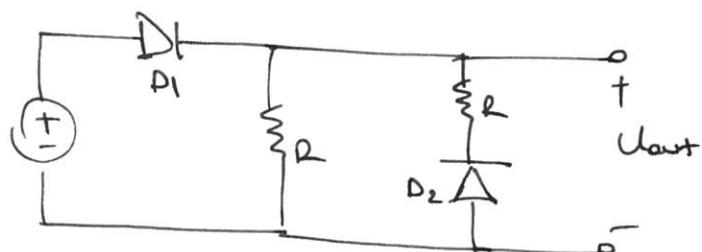


(use the 0.7V drop model  
for the diode)

Problem 2

Consider the following circuit and find:

- $U_{out}$  vs.  $U_{in}$  characteristics
- Sketch  $U_{out}$  vs.  $U_{in}$



(assume the diodes  
 $D_1$  and  $D_2$  are ideal)

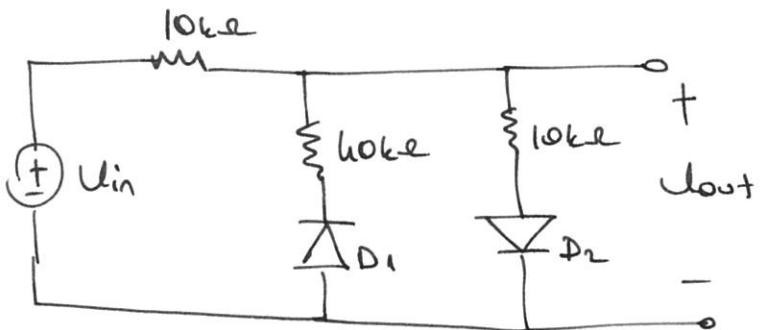
### Problem 3

1 2/2

Consider the following circuit and find:

(a)  $V_{out}$  vs.  $V_{in}$  characteristics.

(b) Sketch  $V_{out}$  vs.  $V_{in}$



(assume the  $D_1$  and  $D_2$  are 0.7 V drop diodes)