

3a) This part of the question concerns  
the function

$$f(x) = \begin{cases} 1, & x=0 \\ 4-2x, & 0 > x > 2, \\ x, & 2 \leq x \leq 4 \end{cases}$$

1) Sketch the graph of  $f$ .

Evaluate  $L(f, P)$  and  $U(f, P)$

for each of the following partitions  
 $P$  of  $[0, 4]$

$$2) P = \{ [0, 2], [2, 4] \}$$

$$3) P = \{ [0, 1], [1, 2], [2, 3], [3, 4] \}$$