**1. JWHT Chapter 7, Problem 1**

(a) For all , 

Thus, 

(b) For all ,



Thus, 

(c) 

 So we show that .

(d) 



We can see .

(e) 

 We could safely draw the conclusion that .

**2. JWHT Chapter 7, Problem 3**

For the given values of , we have:

****

Thus,



**curve(-2\*x\*x+5\*x-1,1,2, xlim=c(-3,3), ylim=c(-3,3), ylab="y")**

**curve(x+1,-2,1, xlim=c(-3,3), ylim=c(-3,3), add=T)**

**abline(v=1,col="red")**

