

Problem Set 1 (due Tuesday Sept. 15)

You may discuss the problems with your classmates but you must write your own solutions. Be clear and to the point. Page numbers refer to the text “Variational methods in Optimization” by Donald R. Smith .

1. (20 pts) For the Brachistocrone problem with $A=(0,0)$. $B=(1,1)$, show that $T(y)$ for the straight line path is worse than $T(y)$ for the circular arc path.

p.8: 3,4,5,6 (10 pts each)

p. 22: 1,2,3,4 (10 pts each)