

## **1 Residuals**

1. Go through the argument that the propensity score is a balancing and fill in the details of the proof.
2. Give the number of continuous derivatives for the function  $f(x) = \sum_{k=0}^k \beta_k x^k + \sum_{j=1}^J x(x - \xi_j)_+^k$  for known knot points.