Assignment 4 MAT 458

Q8: First note that Tf(x) is continuous on  $f \in L^q$  since  $x^{-\frac{1}{p}}$  is, and so is the map  $f \mapsto \int_0^x f(t)dt$ . We also have that T is linear from properties of integration. We see that

$$\|Tf(x)\|_u \leq$$