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# Real Variables: Problem Set IX

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## Abstract

This work contains solutions to the problem set IX of Real Variables 2015 at NYU.

## 1 Solutions

### Question 1. Royden 12-6.

6. Let  $(X, \mathcal{T})$  be a normal topological space and  $\mathcal{F}$  the collection of continuous real-valued functions on  $X$ . Show that  $\mathcal{T}$  is the weak topology induced by  $\mathcal{F}$ .

**Solution.** Consider