Math 3325 Dr. Duval

1. Prove that

$$\bigcup_{n=1}^{\infty} \left[0, 1 - 1/n \right] = \left[0, 1 \right)$$

2. Let \mathbb{R}^+ denote the set of positive real numbers. Prove that

$$\bigcap_{r\in\mathbb{R}^+}(-r,r)=\{0\}$$