

Math 6301 Homework 5

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1. Use the definitions of inner and outer measure to calculate the inner and outer measure of the set $\mathbb{Q} \cap [0, 1]$.
2. **J.2B: 25 Hint:** If $A_1 \supset A_2 \supset A_3$ then $A_1 \sim (A_1 \cap A_2 \cap A_3) = (A_1 \sim A_2) \cup (A_2 \sim A_3)$.
3. **J.2B: 26**
4. **J.2B: 29**
5. **J.2B: 30**
6. **J.2B: 31**

Additional Problem [Not not hand in]

1. **J.2A: 34**
2. **J.2A: 43**