Survey about Lebesgue integral (Blac.)

1. Lebesgue integral vs Riemann integral (idea)

2. Sets of zero measure

3. Idea of measurable set

4. Characteristic functions

5. General pattern of construction of the Lebesgue integral

6. Properties of the integral $\qquad$ (p.113)

7. Integral over a measurable set : Idea of measure. Dirac δ-measure

8. Further properties: Linearity, monotonicity

9. Convergence theorems:
    a. general bla-bla about convergence
    b. Monotone convergence
    c. Dominating convergence
    d. Fatou lemma

10. Lebesgue integral over 2D sets.
    (Comments of the sets of zero measure)

11. Fubini theorem

12. L^p spaces.