1. **Absolutely Continuity**

(15.1) **Definition**: We said that a function is an absolutely continuous, if and for all family of disjoint intervals subset of and satisfy, if , then .

(15.2) **Theorem**:If a function is an absolutely continuous, then is bounded variation.

(15.3) **Corollary**:Every absolutely continuous function on is differentiable.

(15.4) **Example**:Let a function defined as , then is an uniformly continuous, but does not absolutely continuous, since does not bounded variation.

(15.5) **Theorem**:If are absolutely continuous and , then are absolutely continuous.

(15.6) **Theorem**:If a function is a bounded function and Lebesgue integrable on . Define a function as , then is an absolutely continuous on .

(15.7) **Theorem**:If a function is an absolutely continuous on and , then is a constant on .

(15.7) **Theorem**:If a function is a function. The relation satisfies for all iff is an absolutely continuous on .