

MATH 625: Comments on Test 1

Know the following definitions and statements of theorems—you will be asked to give some of them on the exam. You DO NOT need to know the proofs.

1. Definition of one-dimensional Brownian motion and n -dimensional Brownian motion
2. Definition of the class of Itô integrable functions $\mathcal{V}(S, T)$
3. The Itô Isometry—make sure you know the relevant hypotheses
4. Definition of conditional expectation—don't forget the hypotheses!
5. Definition of a martingale

There will also be some work out problems based on Sheets 1 and 2 as well as class examples. Make sure you know that for one-dimensional Brownian motion B_t started at 0,

$$E[B_s B_t] = s \wedge t$$