Quadratic variation] Recall that $d(W_t^2) = 2W_t\,dW_t + dt$. This implies

$$W_t^2 = W_0^2 + \int_0^t 2W_s\,dW_s + \int_0^t ds$$

$$W_t^2 - t = W_0^2 + \int_0^t 2W_s\,dW_s$$

where the RHS is an $\mathcal{F}$-martingale. We therefore conclude that $\langle W \rangle_t = t$.

+end$_s rc$

** Se