Let  $\mu_1$  and  $\mu_2$  be finite measures on  $(\Omega, \mathcal{F})$ ; for a signed measure  $\nu$ , let  $|\nu|$  denote the total variation (measure) of  $\nu$ . Show that

$$|\mu_1 - \mu_2|(\Omega) = d_{TV}(\mu_1, \mu_2).$$