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We analyzed both absolute and relative gravity measurements collected at Mt Etna during a 1-yr time interval spanning the onset of the 2008 eruption. Two significant gravity changes were detected in different sectors of the volcano. In the north-eastern flank, a gravity decrease was observed during the June 2007 – July 2008 period. The computed negative mass variation of about -4.20 x 10Î0 kg could reflect opening of new voids beneath the NE-Rift, which is affected by a strong extensional tectonics. In the southern flank, a gravity increase was observed in September 2007 along an EW trending profile, where quasi-monthly measurements are carried out. The calculated positive mass change of about 1.05 x 10Î1 kg was interpreted as due to shallow and localized magma intrusion just beneath the southern sector of the volcano. We present the results obtained by comparing between relative and absolute gravity measurements and their implications on the latest Etna eruption started on 13th May 2008.