For exercise, Isaac climbed 20 floors of a tall building, totaling 320 steps. Albert went to a nearby mall and kept his center of mass fairly still while taking 320 “up steps” on a downward moving escalator. Isaac reasons that he got more exercise than Albert, since he had to expend the energy to raise his gravitational potential to a height of 20 floors. Nevertheless, Albert feels that he is just as tired and out of breath as Isaac. Is Isaac right? Did he burn more calories than Albert?

Check your answer at the undergraduate news blog:
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