begin mathsize 14px style When space the space kinetic space energy space increases space by space 300 % comma space new space kinetic space energy space will space be straight K apostrophe space equals space straight K space plus space 300 % straight K straight K apostrophe space equals space straight K space plus space 3 space straight K straight K apostrophe space equals space 4 straight K space space space space space space space space left parenthesis straight i right parenthesis We space know space that space straight K. straight E. space comma space straight K space equals space fraction numerator straight P squared over denominator 2 straight m end fraction space space space space space space space space left parenthesis straight m space is space the space mass space of space object right parenthesis Therefore comma space eq. space left parenthesis straight i right parenthesis space become fraction numerator straight P apostrophe squared over denominator 2 straight m end fraction space equals space 4 space fraction numerator straight P squared over denominator 2 straight m end fraction straight P apostrophe squared space equals space 4 space straight P squared straight P apostrophe space equals space square root of 4 space straight P squared straight P apostrophe space equals space 2 space straight P space space space space space space space left parenthesis ii right parenthesis % space change space in space momentum space equals space fraction numerator straight P apostrophe space minus space straight P over denominator straight P end fraction space cross times 100 space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space space equals space fraction numerator 2 space straight P space minus space straight P over denominator straight P end fraction space cross times 100 space % space equals space 1 space cross times space 100 space equals space 100 % Therefore comma space increases space in space momentum space is space 100 %. end style