PHYSICS HW

WORK & ENERGY

1) If the KE of a body increases by 300%, by what % shall the linear momentum of the body increase?

b) 100%

2) A standard 100W electric bulb in series with a heater is connected across the mains. If it is replaced by a 200W bulb, the power output of the heater

a) will be halved

3) A lorry & a car moving with the same KE are brought to rest by applying same retarding force, then -

b) Car will come to rest in shorter distance.

4) A man weighing 60 kg climbs up 45 steps staicase of a building in 9 seconds. If the h of each step is 10 cm then how much power the man has employed ? ($g = 10\ ms^{-2}$)

a) 300W

5) If the momentum of a body is increased by 3 times of its initial momentum, then by how much its KE increased above its initial value which was 100J ?

a) 800J

6) A pump draws 1000kg of water per minute from a well 12 m deep. Then the power of pump in H.P. unit would be very nearly equal to ($g = 10\ ms^{-2}$)

c) 2.63 H.P.

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