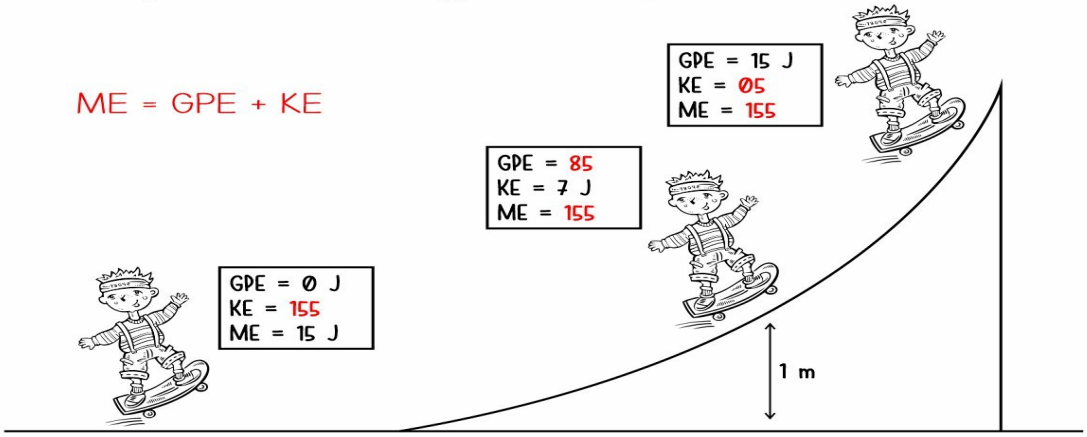
Name _____ Date _____

PHYSICAL SCIENCE WORKSHEET

Coservation of Energy

1. Fill in the missing values. Assume no energy losses due to friction.



2. Sam has 200 joules of gravitational energy when he is standing still on a diving board.
   a. Find his mechanical energy

   ME = GPE + KE
   = 200 + 0
   = 200,5

   b. Sam jumps off the diving board. What is his gravitational potential energy when he is halfway to the water?

   If h is halved, GPE is halved
   GPE = 100,5

   c. What is his mechanical energy when he lands in the water?

   ME is concerned during the motion
   ME = 200,5

3. What is the mass of a child that has a KE of 400 J who is riding her bike at 3,9 ms^{-1}?

$KE = {}^1/_2\ mv^2$

$400 = {}^1/_2 \times m \times 3{,}9^2$

$m = 800 / 3{,}9^2 = 52{,}9\ kg$