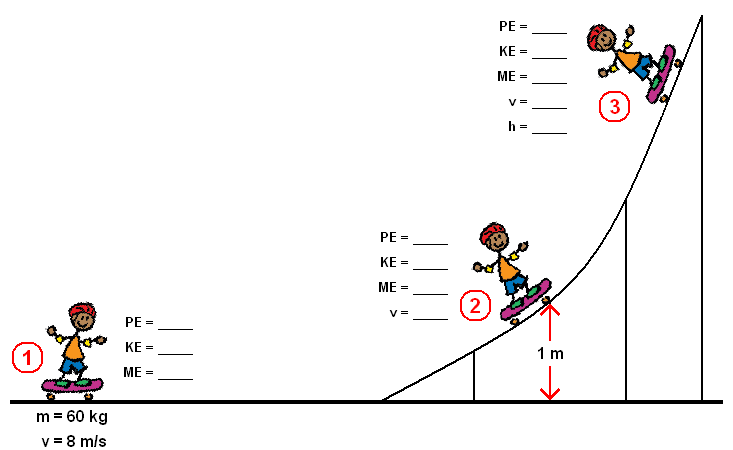
Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_

**PHYSICAL SCIENCE WORKSHEET**

**PE = 15 J**

**KE = \_\_\_\_**

**ME = \_\_\_**

**CONSERVATION OF ENERGY #1**

1. Fill in the missing values.

**PE = \_\_\_\_**

**KE = 7 J**

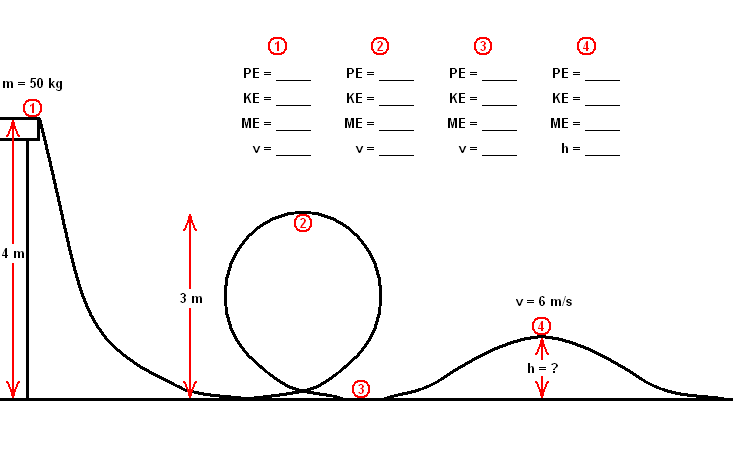
**ME =\_\_\_\_**

**PE = 0 J**

**KE = \_\_\_\_**

**ME = 15 J**

1. Fill in the missing values. m=5kg.



h = ?

PE= 140 J

KE=

ME=

V=

h=

PE=

KE= 200 J

ME=

V=

h=

PE=

KE= 60 J

ME=

V=

h=

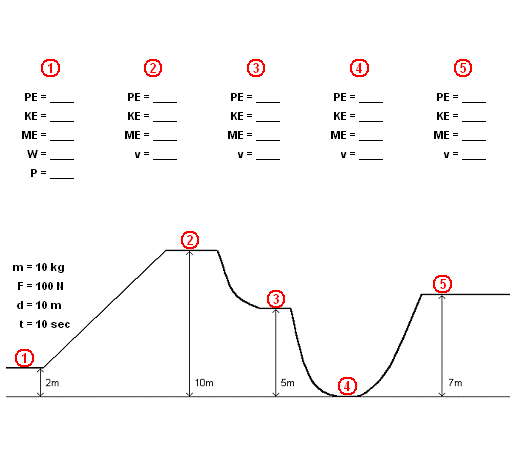
PE= 200 J

KE= 0 J

ME=

V=

h=

1. A 1.8 kg book has been dropped from the top of the football stadium. Its speed is 4.8 m/s when it is 2.9 meters above the ground. What is its mechanical energy?
2. A 28 kg child on a swing is traveling at 4.2 m/s. What is his potential energy if he has 315 J of mechanical energy? What is his height above the ground?
3. Identical twins Rick and Chris are painting a house. Rick is standing on the scaffolding 5 meters above the ground. Chris is standing on the scaffolding 5 meters above Pat. Who has more potential energy? Explain.
4. Fill in the missing values. m=2kg

PE= 39.2J

KE=

ME= 200 J

V=

h=

PE=

KE= 62.8 J

ME=

V=

h=

PE= 0 J

KE=

ME=

V=

h=

PE= 98 J

KE=

ME=

V=

h=

PE=

KE= 0.25J

ME=

V=

h=

1. John has 200 Joules of potential energy when he is standing on a diving board.
   1. Find his mechanical energy.
   2. John jumps off of the diving board. What is his potential energy when he is halfway to the water? If his mass is 40kg, what is his velocity?
2. A ball has a 17 J of kinetic energy and its mechanical energy is 25 J.
   1. Find the potential energy of the ball.
   2. If the ball has a mass of 3.2 kg, what is its height above the ground?
   3. What is the speed of the ball?
3. What is the mass of a child that has a KE of 400 J who is riding her bike at 3.9 m/s?
4. Jared and Clay are climbing the stairs. Jared gets tired and stops halfway to the fourth floor. Clay makes it to the fourth floor without a problem. If Jared is twice as heavy as Clay, who has more potential energy? Explain.