KEY

$KE = \frac{mv^2}{2}$

$PE = m \cdot g \cdot h$

Name: _____ Date: 1-17-2020

Kinetic and Potential Energy

Directions: Circle the one possessing more potential energy and briefly explain your choice.

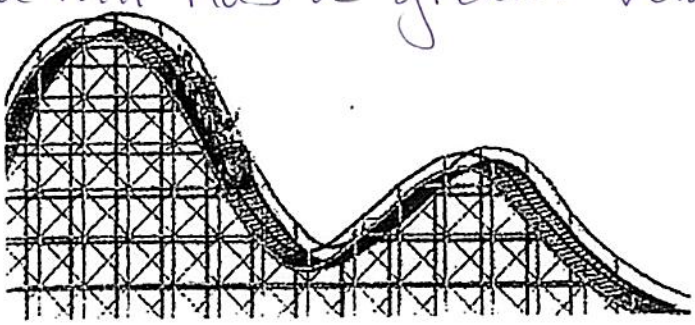
PE = m·g·h

1. A 25 kg bag of sand or a 30 kg bag of sand at the top of a hill?
   The 30kg bag of sand has the greater mass.
2. A car at the top of the hill or the bottom of a hill?
   The car at the top of the hill has a greater height
3. A plane on the ground or a plane in the air?
   The plane in the air has a greater height.
4. A full plane or an empty plane (both are flying)?
   The full plane has a greater mass.

Directions: Circle the one that demonstrates more kinetic energy and briefly explain your choice.

$KE = \frac{mv^2}{2}$

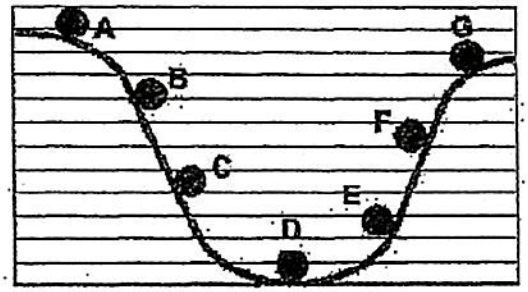
5. A 25 kg dog or a 30 kg dog going 2 m/s.
   The 30kg dog has a greater mass.
6. Two 10 kg masses, one going 75 m/s, one going 45 m/s.
   The one going 75m/s has a greater velocity.
7. A car at rest or a car rolling down a hill.
   The car rolling down a hill has a greater velocity
8. A heavy bike or a light bike.
   The heavy bike has a greater mass.



Name:_____ Period:_____ Date:_____

Unit 1: Energy — Kinetic versus Potential Energy Practice

Part 1: This graph shows a ball rolling from A to G.



1. Which letter shows the ball when it has the maximum kinetic NRG? D
2. Which letter shows the ball when it has the maximum potential NRG? A
3. Which letter shows the ball when it has the least potential NRG? D
4. Which letter shows the ball when it has the least kinetic NRG? A
5. Which letter shows the ball when it has just a little more kinetic NRG than A? B or G
6. Which letter shows the ball when it has just a little more potential NRG than letter C? B or F
7. Which letter shows the ball when it has just a little less potential energy than letter F? E or C
8. Which letter shows the ball when it has just a little more kinetic energy than letter G? B or F
9. Which letter shows the ball when it has just a little less kinetic energy than letter D? C or E
10. Which letter shows the ball when it has just a little less potential energy than letter C? E or D
11. Which sequence correctly shows an increase in potential energy?

(A.) E, F, B, G ✓ B. B, F, E, C
C. D, E, B, F D. A, G, F, C

12. Which sequence correctly shows an increase in kinetic energy?

A. E, F, B, G B. B, F, E, C
C. D, E, B, F (D.) A, G, F, C ✓

13. Which sequence correctly shows an decrease in kinetic energy?

(A.) E, F, B, G B. B, F, E, C
C. D, E, B, F D. A, G, F, C

14. Which sequence correctly shows an decrease in potential energy?

A. E, F, B, G B. B, F, E, C
C. D, E, B, F (D.) A, G, F, C