GPE and KE Worksheet #1

1. What is the GPE of a 2 kg block 5 m above the floor?
2. What is the GPE of a 3 kg ball that is 2 m above the floor?
3. Joe throws a 4 kg stone straight up and it reaches a height of 5 m. What is its GPE at its highest point?
4. Which has more GPE, a 6 kg ball at 6 m or a 7 kg rock at 5 m in height?
5. Which has more GPE a 2.5 kg book at 4 meters or a 1 kg paperweight at 8 m in height?
6. What is the GPE of a 500g box of chocolates 2 m above the ground?
7. How high do you have to lift a 5 kg box to give it 98 J of GPE?
8. How high do you have to lift a 1 kg ball to give it 49 J of GPE?
9. What is the KE of a 4 kg mass at 3 m/s?
10. What is the KE of an 8 kg mass at 5 m/s?
11. What is the KE of a 9 kg mass at 2 m/s?
12. What has more KE, a 3 kg mass at 5 m/s or a 2 kg mass at 8 m/s?
13. What has more KE a 2 kg mass at 10 m/s or a 20 kg mass at 3 m/s?
14. What is the mass of an object that has 100 J of KE when moving at 5 m/s?
15. What is the mass of an object that has 32 J of KE when moving at 2 m/s?
16. A 6 kg mass has a KE of 75 J, what is its velocity?
17. An 8 kg mass has a KE of 144 J, what is its velocity?
18. What has more energy, a 2 kg mass at 10 m/s or a 2 kg mass 5 m above the ground?
19. What has more energy, a 20 kg mass moving at 9 m/s, or a 4 kg mass 25 m above the floor?
20. Fred throws a 6 kg stone into the air with an upward velocity of 10 m/s. What will be the GPE of the stone at its highest point?
21. Martha drops a 1 kg rock off the top of Black Oak Canyon which is 100m deep. What is the KE of the rock the instant before it hits bottom?
22. Jessica throws a 2 kg ball into the air at 7m/s. How high will the ball go?