Name: Dynamics Assignment

1. What is Newton’s First Law and give a real life example. (2 marks)
2. What is Newton’s Second Law and give a real life example. (2 marks)
3. What is Newton’s Third Law and give a real life example. (2 marks)
4. How much force is required to accelerate a 25kg to 3.25m/s2? (1 marks)
5. How fast is an object accelerating if it has a mass of 32kg and experiences a force of 67N? (1 marks)
6. How much mass does an object have if it experienced a force of 12N and accelerates at 2.1m/s2. (1 mark)
7. What force of gravity does Shawnda Lear (m=100.kg) experience? (1 mark)
8. What is the difference between weight (force of gravity) and mass? (2 marks)
9. A 525kg box is pushed across a surface with a force of 1275N. The coefficient of friction is 0.17. Calculate the acceleration. Draw a free body diagram (3 marks) (Hint: Find the net force)
10. Cole Durkey has a mass of 115kg. How much force is necessary to move him if the coefficient of static friction is 0.42? (2 marks)