# Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Review for Sections 1.3, 2.1 and 2.2

F = ma

(v2 – v1)

d

v = a =

t

t

1. Tony’s cart has a mass of 12.2 kg. With what acceleration will that cart move when acted upon by a force of 63.1 N?



2. What will be the acceleration of the soccer ball shown in the picture if it has a mass of 1.75kg?

3. If we decreased the mass of the soccer ball above by 1/2, how would that change the acceleration of the ball?

4. Looking at the diagram below, what is the net force on the skydiver?

![MCPE05642_0000[1]]() Air resistance = 580N

Force of Gravity = 580N

5. Is the skydiver moving? Is the skydiver accelerating?

6. The top speed of a honey bee is about 20 m/s. If it flies for 17.2 seconds, how far will it have flown?

7. What is the acceleration of a train that starts from rest and reaches a speed of 105 m/s in 30 seconds?

8. If an object has zero net force acting on it, what is its acceleration? What could the object be doing?



9. What will happen to the box in the car when you make a left hand turn? Explain why using Newton’s First Law of Motion.

10. What is the acceleration of a car moving at a steady speed of 60 mph?

11. Why does a passenger in a car feel a force on their back when a car accelerates?

12. John rides a bicycle at an average speed of 9 m/s for 420 seconds. What is the distance he travels? SHOW 5 STEPS

13. An airplane travels 500 miles at an average speed of 200 miles/hr. How long did it take for the airplane to travel this distance? SHOW 5 STEPS

**Important:** **Make sure you review your units prior to taking the test!**