**MOMENTUM PROBLEMS**

1. A baseball player throws a baseball with a momentum of 5.83 kgm/s. Given that the ball has a mass of .145 Kg, what is the speed of the ball?
2. The maximum speed for a golf ball is 273 Km/h. If a golf ball with a mass of 47g and a momentum of 5.83kgm/s, the same as the baseball, what would be the speed be of the golf ball?
3. A plane moves along the ground with a speed of 88 Km/h. The momentum of the plane is 2790 Kgm/s. What is the mass of the plane?
4. The most massive car ever built was the Russian made Zil-41047. If one of these cars were to move at just 8.9 m/s, its momentum would be 2.67 x 10 4 Kgm/s. What is the mass of the car?
5. The 300 series train consists of 16 cars with a combined mass of 7.10 x 10 5 Kg. The train is able to reach a speed of 270 Km/h. What is the momentum of the train?
6. The largest animal ever to have lived on earth is the Blue Whale. Consider a blue whale with a mass of 1.46 x 10 5 Kg and a top swimming speed of 24 Km/h. What is the momentum of the whale?
7. The largest species of hummingbird is the giant hummingbird of the Andes. The bird has a length of 21 cm and can fly with a speed of up to 50 Km/h. Suppose one of these birds flies at this top speed with a momentum of 2.78 x 10 4 Kgm/s, what is the bird’s mass?
8. The fastest speed recorded for a race car in the Indy 500 was set in 1996 during a pre-race qualifying round. The minimum mass for a race car in the US is 705 Kg, so the minimum momentum of the record-setting car would have been 7.49 x 10 4 Kgm/s. What was the car’s speed in m/s AND Km/h?

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