1. Alfonso pushes a box on a well waxed (frictionless) floor to the right with a 20 N force causing it to accelerate at $1.5 \mathrm{~m} / \mathrm{s} / \mathrm{s}$. What is the mass of the box?

2. The Jamaican bobsled team applies a force of 500 N to their 75 kg sled experiencing 5 N of friction. What is the acceleration of the sled (assume the ice is frictionless)?

3. A 3.00 kg cart on a frictionless track is pulled by a string so that accelerates at $2.00 \mathrm{~m} / \mathrm{s} / \mathrm{s}$. Calculate the tension in the string?

4. A 70.0 kg skydiver falls towards the earth. If the force due to air resistance is 0 N , what is the acceleration of the skydiver?

5. The 70 kg skydiver in problem 5 opens her chute. The force due to air resistance is now 1200 N . What is the acceleration of the skydiver?

6. Calculate the force applied on an object accelerating $60 \mathrm{~m} / \mathrm{s}^{2}$ if its mass is 35 kg .
7. What is the mass of an object that takes 120 N of force to move with an acceleration of $50 \mathrm{~m} / \mathrm{s}^{2}$ ?
8. What is the weight of a 11.5 kg person jumping off a diving board?
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