

1.

A locomotive pulling a train is accelerating the train on level track. The tension in the couplings is:

- The same anywhere along the train.
- Least between the last car and the caboose.
- Least between the locomotive and the first car.
- None of these.

2.

The engine on a fighter airplane can exert a force of 105,840 N (24,000 pounds). The take-off mass of the fighter plane is 16,875 kg (it weighs 37,500 pounds). If you mounted the airplane engine on your car, what acceleration would you get? (Use a reasonable estimate for the mass of your car.)