

What is gravity?

① Gravity pulls objects together.

② Air resistance

③ James, gravitational pull depends on two things:

i) mass of the objects

ii) separation of the objects

so if they are both the same distance from Earth then James' greater mass means he experiences a stronger force.

④ It increases air resistance.

⑤ 3000 N, if it's at its terminal velocity, speed isn't changing which means the forces must be balanced. We have 3000 N weight due to gravity down so we must have 3000 N upwards from air resistance.