

**What is the net force that acts on an object that weighs 10 newtons if the object is in freefall?  
Why is it that a light object accelerates at the same speed as a heavier object in free fall?**

The total force is equal 10 newtons. When object is in freefall the only force, which accelerate it is gravity. And this force is equal to the objects weight.

If we ignore air resistance:

$$mg = ma$$

$$a = g$$

So, all objects (with any mass) get the same acceleration –  $g$ .