You have 20 M&Ms bags. 19 bags have 1.0 gram pieces, but one has pieces of weight 1.1 grams. Given a scale that provides an exact measurement, how would you find the heavy bag? You can only use the scale once.

Each bag you will have to take n + 1 amount of M&Ms out, for instance the 1st bag you take out 1 M&Ms, the 2nd bag you take out 2 M&Ms and so on. Now when you weight it on the scale depending what the denth value will tell you what bag is it, for instance if you're total M&Ms weight comes out to #.8 then you know the eighth bag is the heaviest.