Barbie Bungee

Barbie® recently celebrated her birthday, and decided to do something exciting. Barbie has been, among other things, a nurse, an astronaut, a police officer, and an airline pilot, but she has never been bungee jumping!

We will create an exciting, but safe, bungee jump for Barbie. In order to make the jump exciting, the bungee should stretch close to the ground below. In order to make the jump safe, the jumper should not reach the ground below!

Use the materials provided to determine how many rubber bands would be needed to make an exciting, safe, jump for Barbie from any given height. Show your work and explain your reasoning.