For rising upward,

We know, g =

To rise we need more than and gain 20 meters.

Primarily we have considered that it will take 16 seconds to gain 20 meters.

So,

So, we get,

Now, upward force = against 78.4 N

At x=0 meter,

At x=10 meter,

At x=100 meter,

Each of the fire extinguishing ball weights around 450gm. So, it we throw the ball at 7 feet or 2.133 meters away.

Acceleration we need,

Force we need to apply,

We will use stainless steel as spring material. [Spring Constant 0.19]

The stiffness of the spring will be,

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