A 20 cm long capillary tube is dipped in water. The water rises up to 8cm. If the entire arrangement is put in freely falling elevators the length of water column in capillary tube will be?

From the first Newton's law of motion:
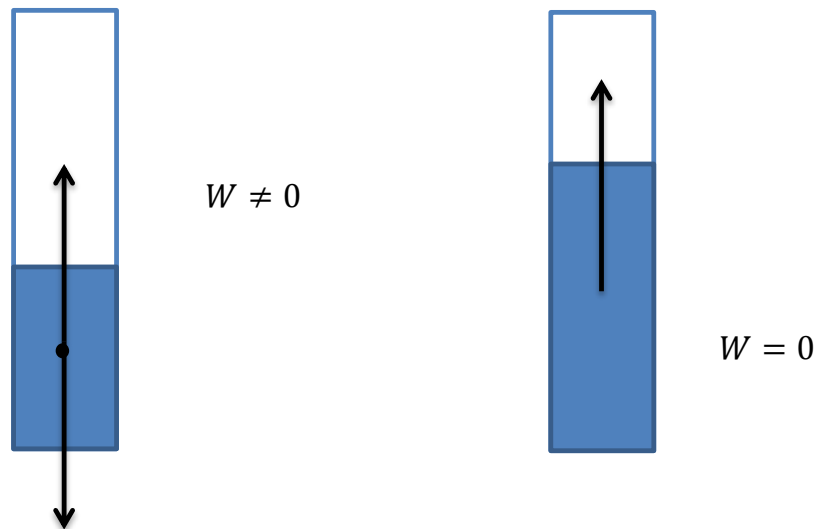
$$F_{cap} = W$$

where W – weight of water column, F_{cap} - capillary force

weight of water column equals:

$$W = mg = \rho h S g$$

where ρ - density of water, g – acceleration due to gravity, h - high of column, S – area of the tube.

In freely falling elevator $W = 0$:

The capillary force will be the same for both cases therefore water fill whole tube, so $h = 20\ cm$

Answer: $20\ cm$