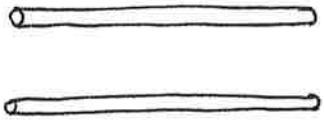
# ASG v 2 Ex 5.3 (Violin Strings)



E note, $f_E = 165\,Hz$

G note $f_G = 196\,Hz$

Since, according to Galileo, the weights of the strings affect their frequencies according to

$$\frac{f_E}{f_G} = \sqrt{\frac{W_G}{W_E}}$$

this means that

$$\frac{W_G}{W_E} = \left(\frac{f_E}{f_G}\right)^2 = \left(\frac{165}{196}\right)^2$$

$$\frac{W_G}{W_E} = 0.71$$

So the string playing the G note has less weight per unit length than the string playing the E note.