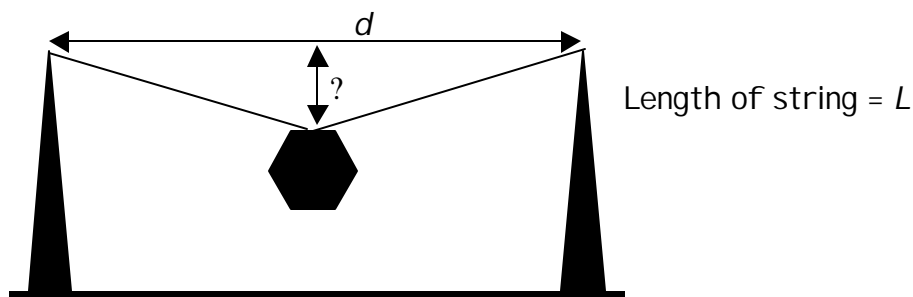


Weight on a String Skill Set

In the diagram below, a weight is hung from the center of a string of length L which is stretched between two points separated by distance d .



The weight will hang down by a distance that is given by this expression:

$$\sqrt{\left(\frac{L+d}{2}\right)\left(\frac{L-d}{2}\right)}$$

- Put these operations in the order in which they should be done according to the above expression:

Divide by 2

Take the square root

Add or subtract L and d

Multiply

- Compute the value of the expression above for the given values of L and d :

L	d	How far down will the weight hang?
10 inches	8 inches	
100 cm	50 cm	
25.4 cm	20.1 cm	
200 feet	195 feet	
1.2×10^3 meters	9.8×10^2 meters	