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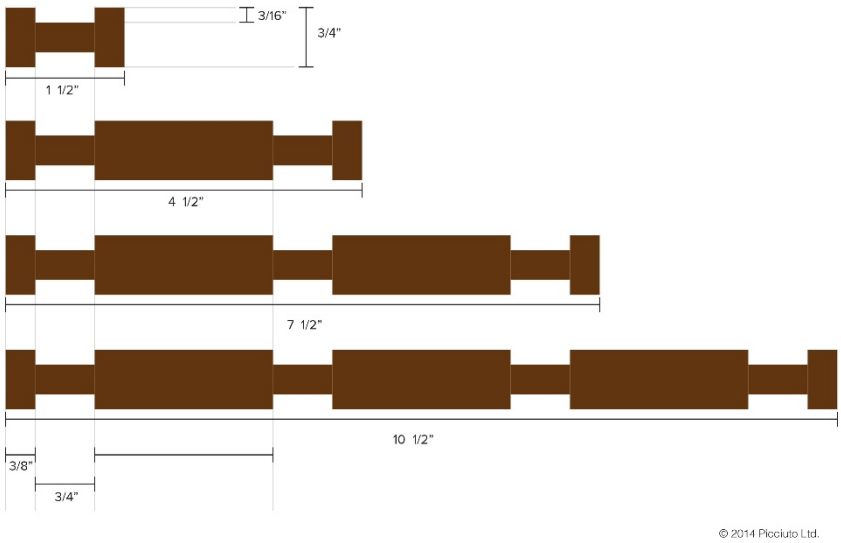
Question 2

In order to solve this we would need Lincoln Logs that were to-scale to the Empire State building. The Empire State Building was a width of 57m, length 129.2m, and a height of 381m (to the roof).

We would need Lincoln Logs with lengths of the size of the width (57m) and length (129.2m) of the Empire State Building. To get the height that we would use for each Lincoln Log I did research and found that the size of the longest Lincoln log is ¾ inches in height and 10 ½ inches in length shown in Figure 1 below. I took the ratio of that to find the height shown below.



$$\frac{.01905m(height\ of\ Lincoln\ Log)}{.2667m(length\ of\ Lincoln\ Log)} = \frac{X(height\ of\ Empire\ Log\ )}{57m(length\ of\ Empire\ Log)}$$

$$X(height\ of\ Empire\ Log = \frac{.01905m(height\ of\ Lincoln\ Log)}{.2667m(length\ of\ Lincoln\ Log)}\ 57m(Length\ of\ Empire\ Log)$$

X = 4.7m

So each Lincoln Logs will all have a height of 4.7m. From there you would just divide that by the height of the empire state building which will give you 81. But there are 4 sides to the building so you would just multiply that by 4 which is about 324 Lincoln logs. 162 logs having a length of 57m 162 logs having a length of 129.2m and all having a height of 4.7m. You would need a separate piece for the tip of the Empire State building because the calculation is only to the roof.