

MATHCOUNTS 2013-2014 FALL Newsletter Poster Problem



If this letter M has an area of 395.6 cm^2 , what is its area when its linear dimensions are reduced to one-quarter of their current lengths? Express your answer as a decimal to the nearest hundredth.

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If the dimensions of the original letter are reduced to $\frac{1}{4}$ of their current length, then its new area will be $(\frac{1}{4})^2 = \frac{1}{16}$ of what it is currently. Therefore, the new area of the letter M will be $395.6 \div 16 = 24.725 \approx \mathbf{24.73 \text{ cm}^2}$.