

Trigonometry Exam: Question 24

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We first find the volume of the box and then find the volume of a pretzel rod.
Then we divide the volume of the box by the volume of a pretzel rod to see
how many pretzel rods can fit into the box.

$$V_{\text{box}} = 10 * 10 * 8 \rightarrow 800 \quad (1)$$

$$V_{\text{rod}} = \pi * (0.25)^2 * 5 \rightarrow 0.98 \quad (2)$$

$$n_{\text{rods}} = \frac{V_{\text{box}}}{V_{\text{rod}}} \rightarrow \frac{800}{0.98} \approx 816 \quad (3)$$

The box can fit 816 whole pretzel rods.