We first need to find the volume of the box and the volume of each trail mix box. Once we know these volumes, we simply dive the volume of the box by the volume of the trail mix box to find the number of trail mix boxes.

$$V_{box} = 18 * 24 * 12 \tag{1}$$

$$V_{trail} = 4 * 3 * 3 \tag{2}$$

$$V_{box} = 18 * 24 * 12$$
 (1)
 $V_{trail} = 4 * 3 * 3$ (2)
 $n_{trail} = \frac{V_{box}}{V_{trail}} \rightarrow \frac{5184}{36} = 144$ (3)

144 trail mix boxes will fit into the box that needs to be shipped.