## Answer on Question \#49465, Chemistry, Other

## Task: <br> What mass of copper (II) nitrate is required to prepare a 0.500 L of a $0.750 \mathrm{~mol} / \mathrm{L}$ solution?

## Answer:

$$
\begin{aligned}
& \mathrm{C}_{\mathrm{M}}=\frac{v}{V} \quad v=\frac{m}{M} \\
& v\left(\mathrm{CuNO}_{3}\right)=\mathrm{C}_{\mathrm{M}}\left(\mathrm{CuNO}_{3}\right) \cdot \mathrm{V}\left(\mathrm{CuNO}_{3}\right) \\
& m\left(\mathrm{CuNO}_{3}\right)=v\left(\mathrm{CuNO}_{3}\right) \cdot M\left(\mathrm{CuNO}_{3}\right) \\
& M\left(\mathrm{CuNO}_{3}\right)=125.5 \mathrm{~g} / \mathrm{mol} \\
& v\left(\mathrm{CuNO}_{3}\right)=0,750 \cdot 0,5=0,375 \mathrm{~mol} \\
& m\left(\mathrm{CuNO}_{3}\right)=0,375 \cdot 125,5=47,06 \mathrm{~g}
\end{aligned}
$$

