How many moles of water are produced from 40 moles fat ?

## Solution

Assume that the fat is all tripalmitoylglycerol:
$2 \mathrm{C}_{57} \mathrm{H}_{110} \mathrm{O}_{6}+163 \mathrm{O}_{2} \rightarrow 114 \mathrm{CO}_{2}+110 \mathrm{H}_{2} \mathrm{O}$
$\mathrm{n}\left(\mathrm{H}_{2} \mathrm{O}\right)=\frac{40 \mathrm{moles} \cdot 110 \mathrm{moles}}{2 \mathrm{moles}}=2200 \mathrm{moles}$
Answer: $n\left(\mathrm{H}_{2} \mathrm{O}\right)=2200$ moles.

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