

$3.52 \text{ g} \rightarrow \text{C}_x\text{H}_y\text{O}_z + \text{O}_2 \rightarrow \boxed{\text{CO}_2} + \boxed{\text{H}_2\text{O}}$
 ethyl butyrate 6.32 mg 2.58 mg
 $2.78 \text{ mg} = 2.78 \times 10^{-3} \text{ g}$ $6.32 \times 10^{-3} \text{ g}$ $2.58 \times 10^{-3} \text{ g}$

$X = \text{moles C}, Y = \text{moles H}, Z = \text{moles Oxygen}$

$X = \text{moles Carbon}$

$6.32 \times 10^{-3} \text{ g CO}_2$	$\frac{1 \text{ mole CO}_2}{44 \text{ g CO}_2}$	$\frac{1 \text{ mole C}}{1 \text{ mole CO}_2}$	$= 1.44 \times 10^{-4} \text{ mole C}$
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$1.72 \times 10^{-3} \text{ g C}$

$Y = \text{mole H}$

$2.58 \times 10^{-3} \text{ g H}_2\text{O}$	$\frac{1 \text{ mole H}_2\text{O}}{18 \text{ g H}_2\text{O}}$	$\frac{2 \text{ mole H}}{1 \text{ mole H}_2\text{O}}$	$= 2.87 \times 10^{-4} \text{ mole H}$
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$2.87 \times 10^{-4} \text{ mole H}$

$2.87 \times 10^{-4} \text{ mole H} \times 1 \text{ g H} = 2.87 \times 10^{-4} \text{ g H}$

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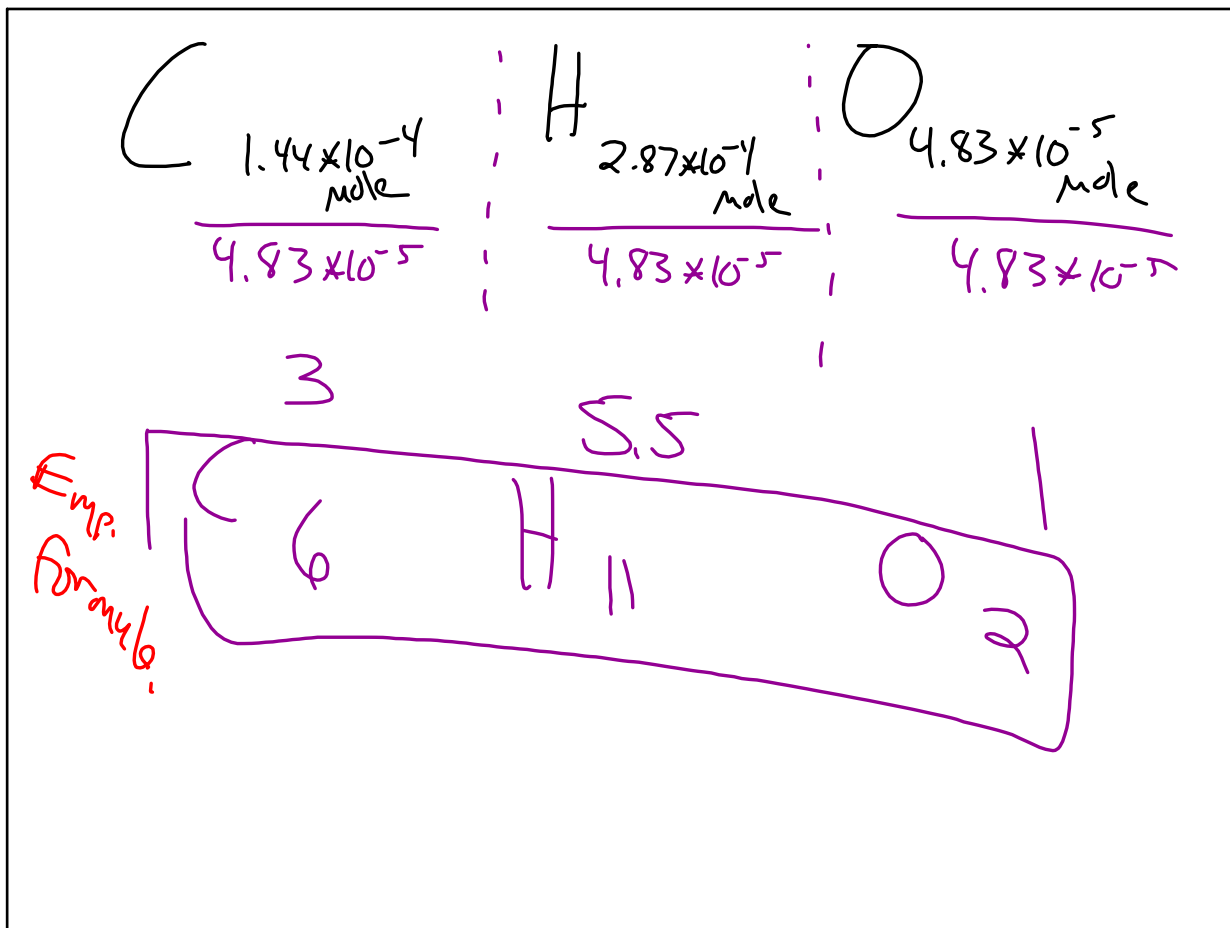
$1.72 \times 10^{-3} \text{ g C} + 2.87 \times 10^{-4} \text{ g H} + \text{g Oxygen} = 2.78 \times 10^{-3} \text{ g}$

$7.73 \times 10^{-4} \text{ g oxygen}$

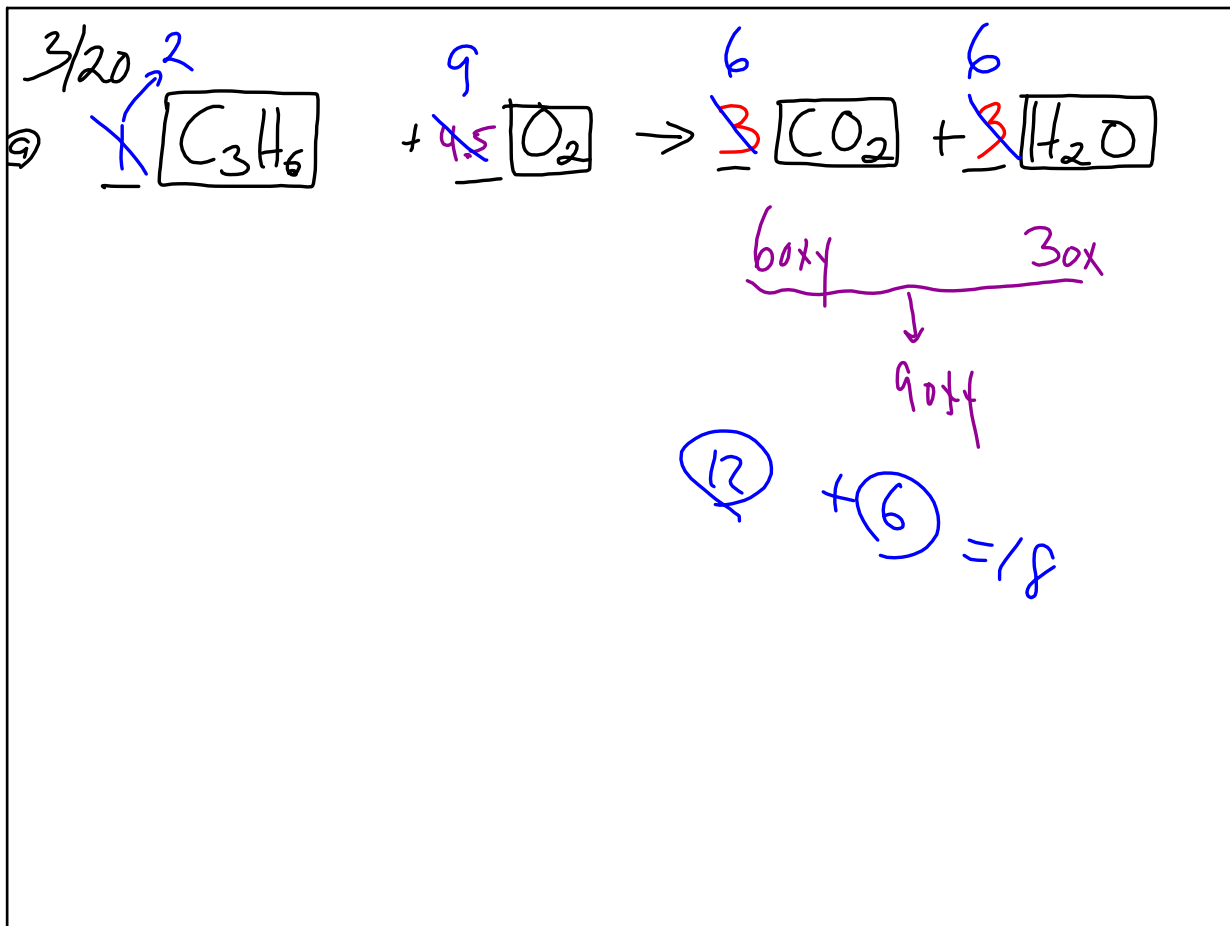
$7.73 \times 10^{-4} \text{ g Oxy}$	$\frac{1 \text{ mole Oxy}}{16 \text{ g Oxy}}$	$= 4.83 \times 10^{-5} \text{ mole Oxy}$
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Z

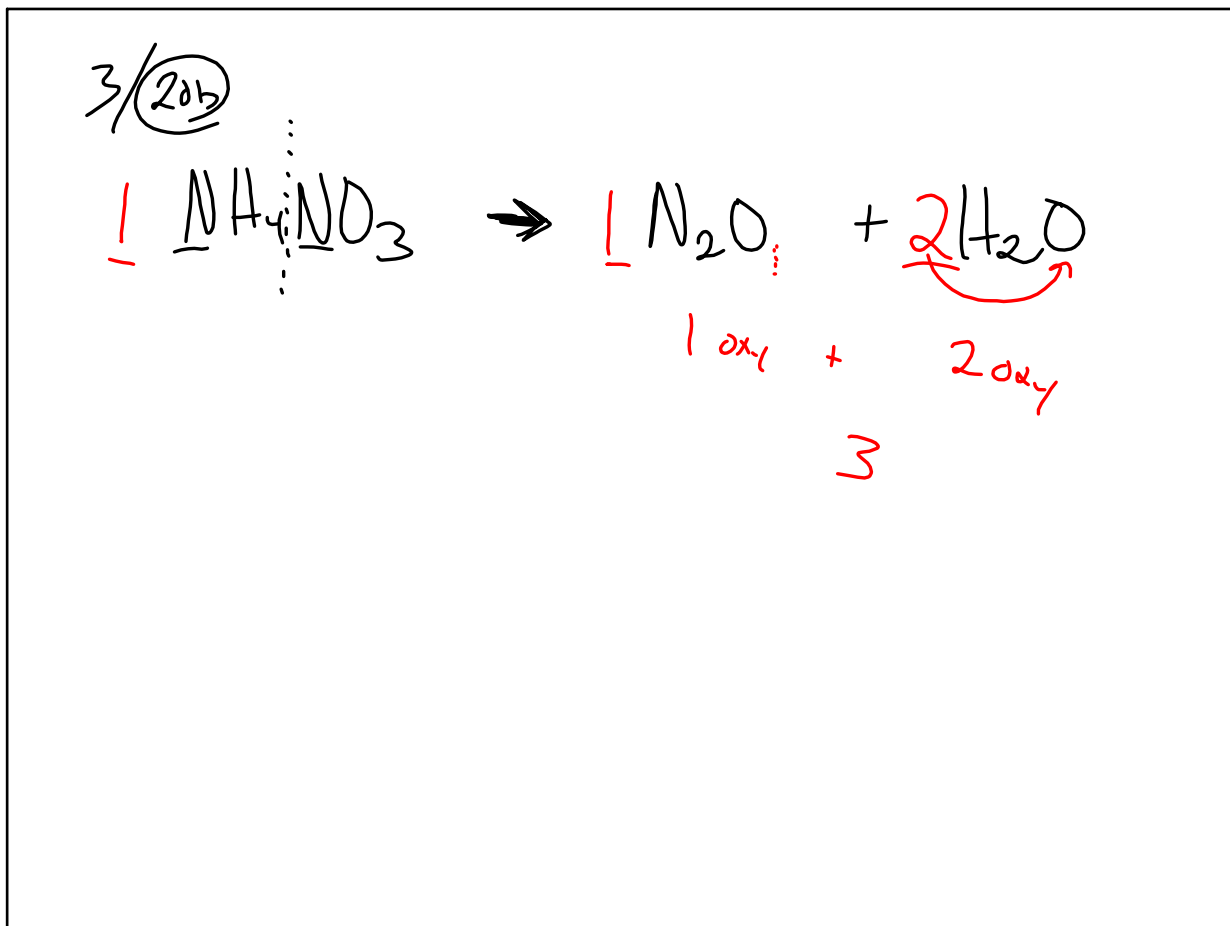
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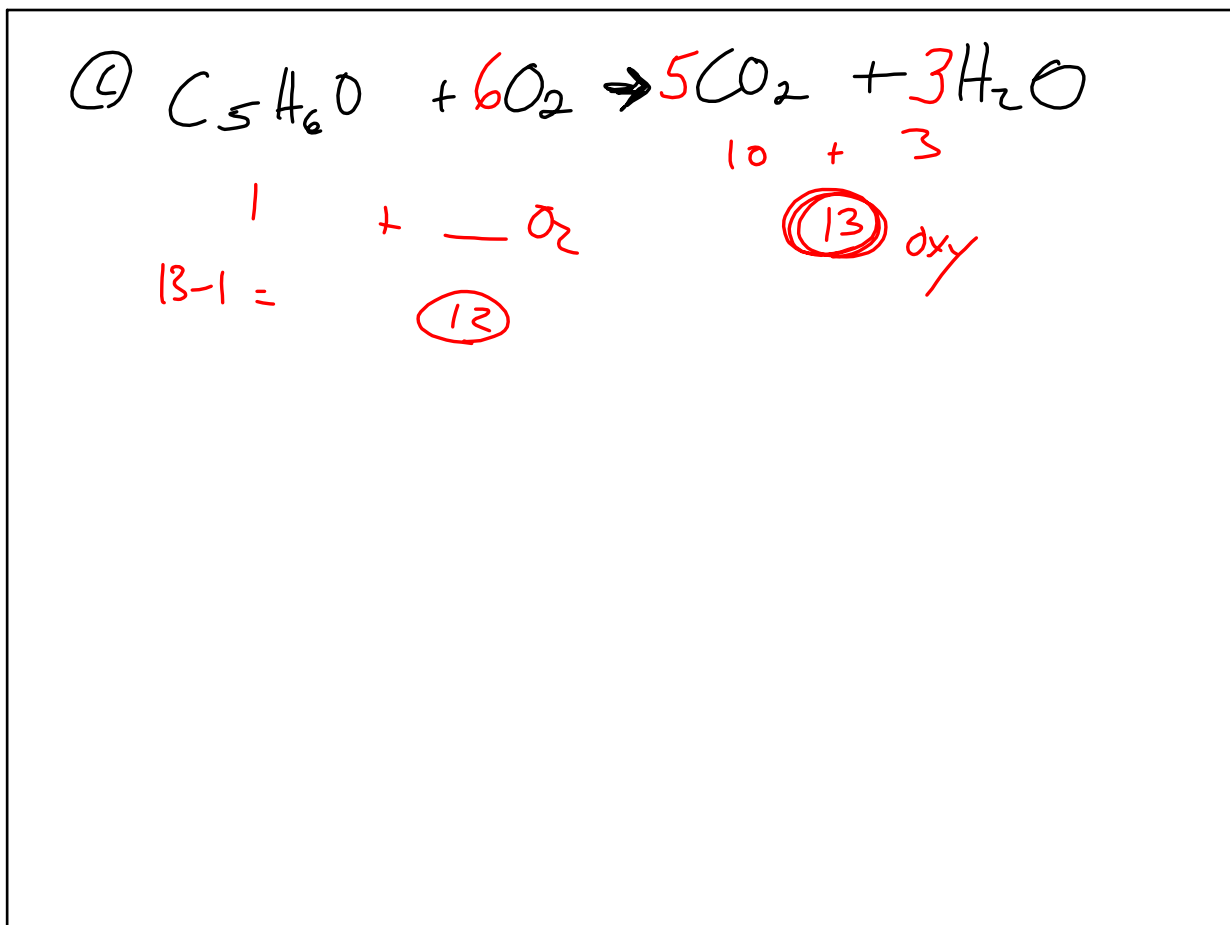
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