## Percent Yield Homework

I performed the following chemical reaction:

$$
\ldots \mathrm{C}_{3} \mathrm{H}_{5} \mathrm{OH}+\ldots \mathrm{O}_{2} \rightarrow \ldots \mathrm{CO}_{2}+\ldots \mathrm{H}_{2} \mathrm{O}
$$

1) Balance the equation in the spaces above.
2) What type of reaction is taking place here? $\qquad$
3) Complete the equation by showing symbols of state as well as symbols around the arrow and $\Delta \mathrm{H}$ values, if possible.
4) If I were to start with 45 grams of $\mathrm{C}_{3} \mathrm{H}_{5} \mathrm{OH}$ and an excess of oxygen, how many grams of carbon dioxide might I expect to make?
5) If my actual yield of carbon dioxide was 25 grams, what is my percent yield for this reaction?
6) Is my answer from problem \#4 reasonable? If it is, explain why. If not, explain why not.
7) Explain why chemical reactions very rarely have a percent yield of $100 \%$.
