Worksheet 11.6: Solutions **Organic reaction pathways**

No.	Answer
1	Oxidation reaction
2	A: primary alcohol B: aldehyde C: carboxylic acid
3	Reaction 1—secondary aldehyde to ketone—is also an oxidation reaction.
4	UV light and Cl ₂ are both required.
5	Addition reaction
6	 a HCl is the reagent required for both reactions 5 and 6 b The products are different because the HCl has added across the double bond in a different orientation. In reaction 5, the Cl has added onto carbon 1, whereas in reaction 6, the Cl has added onto carbon 2.
7	$H \rightarrow C \rightarrow $
	1,2-dichloropropane
8	Alkane
9	H H H $H H$ $H H$ $H H$ $H H$ $H H$ H H H H H H H H H
10	Compound F is a polyalkene.
11	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
12	The empirical formulas are the same.
13	Reactions 10 and 11 are examples of nucleophilic substitution reactions.
14	See coursebook figure 11.6.2.

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