SUMMARY OF REACTIONS COVERED IN CHEMISTRY 341

	TO Alkane	TO Alkyl halide	TO Alkene	TO Alkyne	TO Alcohol	TO Ether	TO Aldehyde	TO Ketone
FROM Alkane	-	III.3., VI.4.1.	-	-	-	-	-	-
FROM Alkyl halide	VI.5.2.	-	VI.5.3., VIII.2.1., VIII.2.3.	IX.2.2.	VI.5.1.	VII.	-	-
FROM Alkene	VIII.3.1.7.	VIII.3.1.1., VIII.3.1.3. VIII.3.1.6.(B)	-	(VIII.3.1.3. then IX.2.2.)	VIII.3.1.2. VIII.3.1.5. VIII.3.1.6(A)	VIII.3.1.5.	VIII.3.2.1.	VIII.3.2.1.
FROM Alkyne	IX.3.1.1.	IX.3.1.2., IX.3.1.3.	VIII.2.5., IX.3.1.1.	-			IX.3.1.4.	IX.3.1.4.
FROM Alcohol	-	VI.4.3.	VIII.2.2.	-	-	-	-	-

	TO Alkane	TO Alkyl halide	TO Alkene	TO Alkyne	TO Alcohol	TO Ether	TO Aldehyde	TO Ketone
FROM Alkane	-	Br_2, AIBN, heat	-	-	-	-	-	-
FROM Alkyl halide	$LiAlH_4$, ether	-	$NaOCH_3$ or KO^tBu	$NaOCH_3$ or KO^tBu or $NaNH_2$	1^o, 2^o: NaOH (S_N2) 3^o H_2O (S_N1)	(1^o, 2^o) NaOR (S_N2) 3^o ROH (S_N1)	-	-
FROM Alkene	H_2, Pd/C	Mv: HBr anti-Mv: HBr/ROOR/heat Br_2 (adds 2 Brs)	-	Br_2 then $NaOCH_3$ (2 steps)	Mv: H_2SO_4/H_2O or $Hg(OAc)_2$, H_2O then $NaBH_4$ Anti-Mv: BH_3.THF then OH^-/H_2O_2	$Hg(OAc)_2$, ROH then $NaBH_4$	O_3 then $(CH_3)_2S$	O_3 then $(CH_3)_2S$
FROM Alkyne	H_2, Pd/C	Mv: HBr anti-Mv: HBr/ROOR/heat	Cis: H_2, Lindlar cat. Trans: Na, liq NH_3	-	-	-	Sia_2BH then OH^- $/H_2O_2$	$HgSO_4$, H_2O, H_2SO_4
FROM Alcohol	-	1^o, 2^o: PX_3 3^o HX	H_2SO_4, heat	-	-	-	-	-