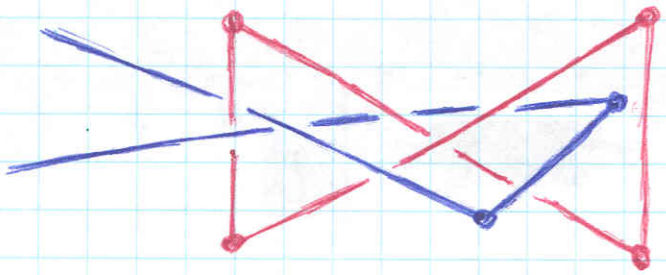
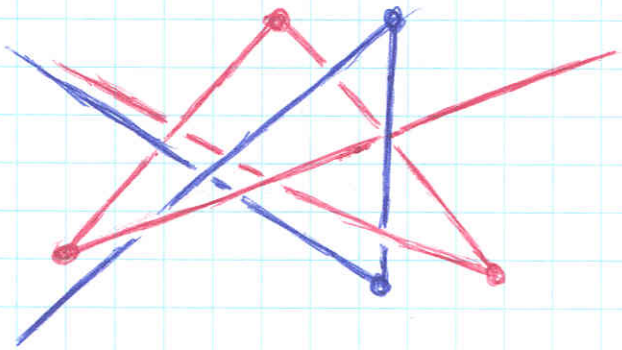
3-chain can interlock with quadrangle (closed 4-chain)

6.885
L22.4
Dec. 1, 2004



- another topological argument

3-chain can interlock with 4-chain



- topological argument difficult for two open chains
- instead use geometric argument about bars striking faces of convex hull

Variations

- rigid chains (as we saw with 2-chains)
- revolute (fixed-angle) chains

		2-chain		3-chain			4-chain			5-chain
		flex.	rigid	flex.	rev.	rigid	flex.	rev.	rigid	rigid
2-chain	flex.	−	−	−	−	−	−	−	−	+
	rigid	−	−	−	−	+	+	+	+	+
3-chain	flex.	−	−	−	−	+	+	+	+	+
	rev.	−	−	−	+	+	+	+	+	+
	rigid	−	+	+	+	+	+	+	+	+
4-chain	flex.	−	+	+	+	+	+	+	+	+
	rev.	−	+	+	+	+	+	+	+	+
	rigid	−	+	+	+	+	+	+	+	+
5-chain	rigid	+	+	+	+	+	+	+	+	+