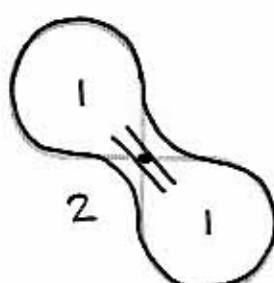
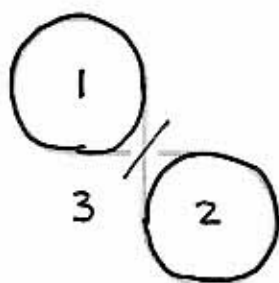
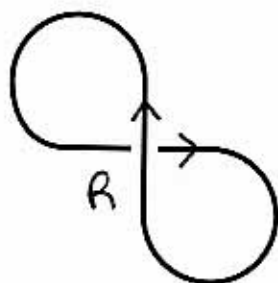


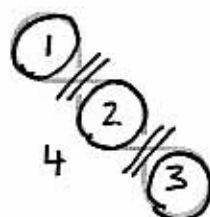
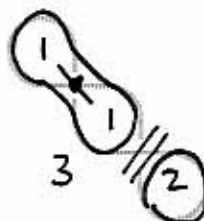
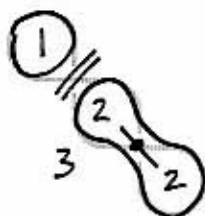
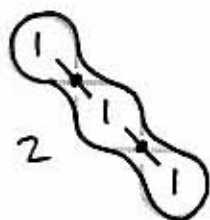
②



Kauffman: $-A^3$

writhe: $-A^3$

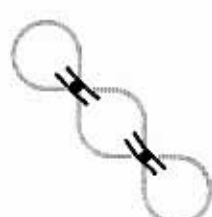
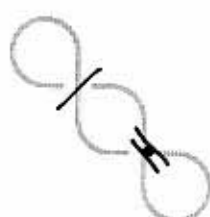
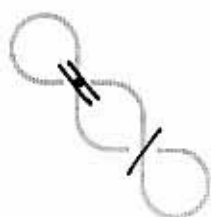
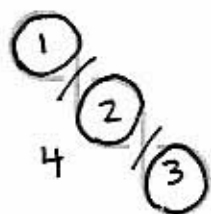
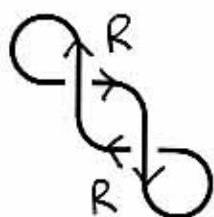
B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
								+		⊕								
								+		⊕		-						
												-						



writhe: B^6

Hand-drawn diagram of a 9-bit carry-lookahead adder. The diagram shows two horizontal lines representing signal paths. Above the top line are inputs B^9 to B^1 , 1 , A^1 to A^9 . Above the bottom line are inputs A^2 to A^9 . The diagram includes several circles with '+' and '-' signs, and lines connecting them to represent carry propagation logic.

⑤

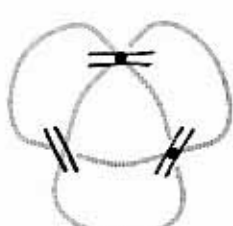
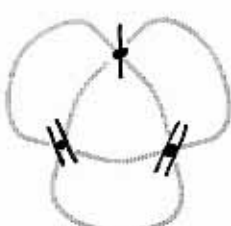
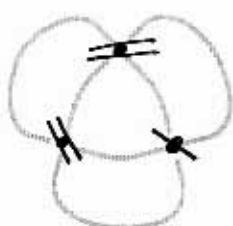
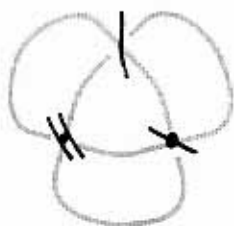
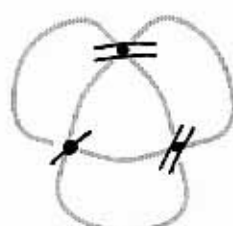
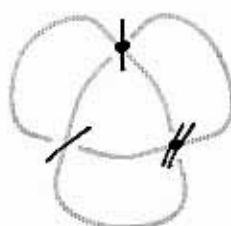
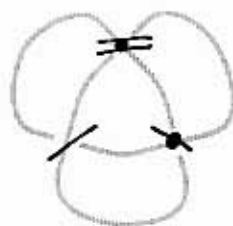
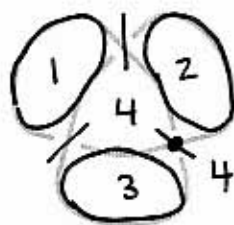
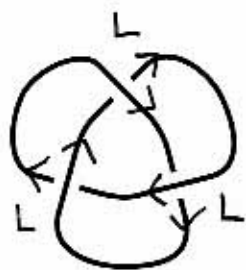


Kauffman: A^6

writhe: A^6

B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
							+		⊕ ⊕		⊕							
							+		⊕ ⊕		⊕		⊖		+			
															+			

⑥

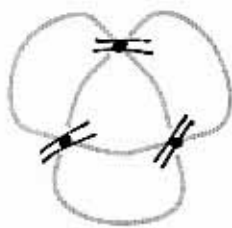
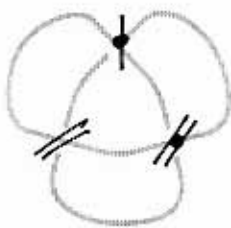
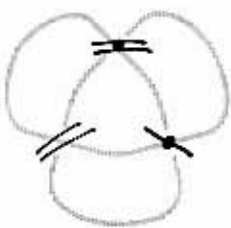
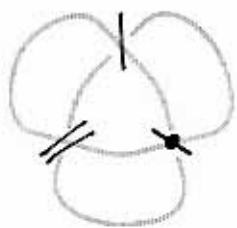
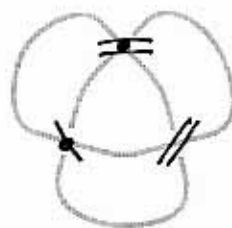
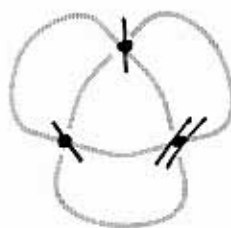
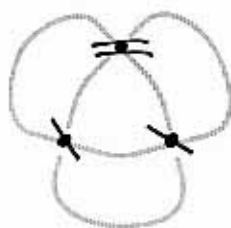
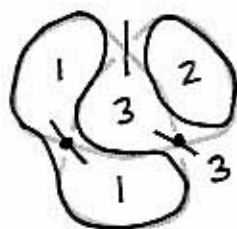
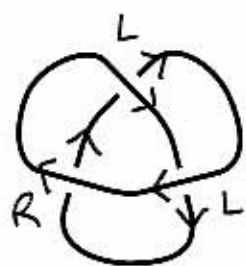


Kauffman: $-B^5 - A^3 + A^7$
 writhe: $-B^9$

} knotted

B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
						$\oplus$		$+$ $+$ $+$		$\oplus$ $\oplus$ $\oplus$		$\oplus$						
				-		$\oplus$		$+$ $+$ $+$		$\oplus$ $\oplus$ $\oplus$		$\oplus$		$\oplus$				
				-								-						

⑦

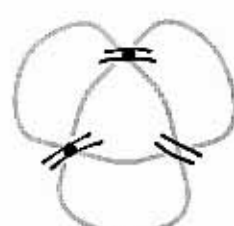
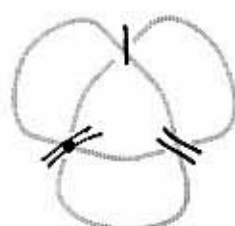
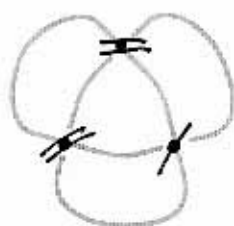
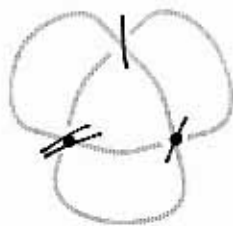
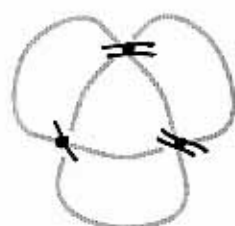
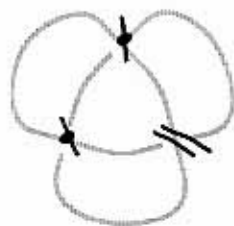
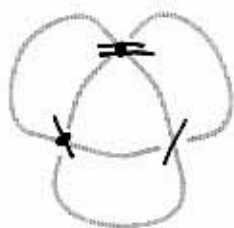
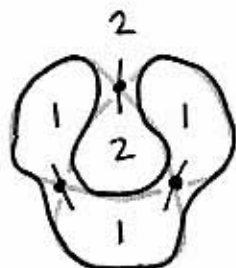
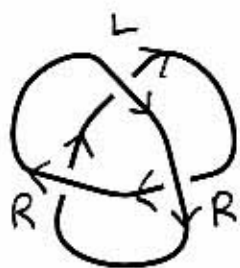


Kauffman: $-B^3$

writhe: $-B^3$

B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
						+		⊕		+		⊕						
								⊕		+		⊕						
								⊕		⊕		⊕						
								⊕		⊕		⊕						
						+		⊕		⊕		⊕						
						-		⊕		⊕		⊕						
						-		⊕		⊕		⊕						

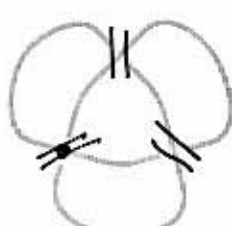
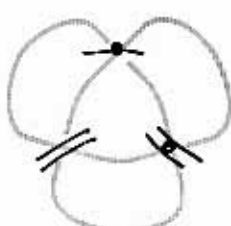
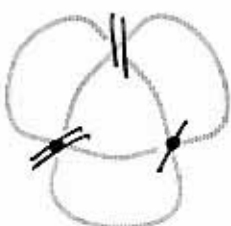
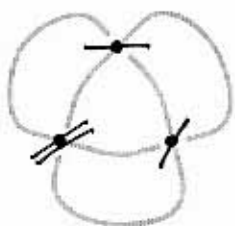
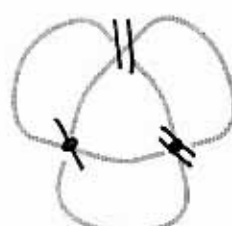
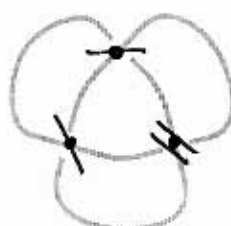
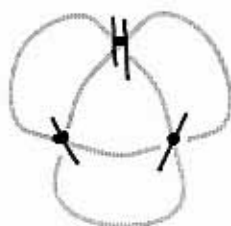
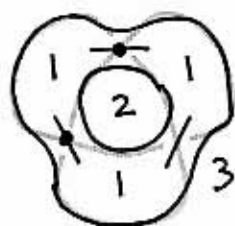
⑧



Kauffman: $-A^3$

writhe: $-A^3$

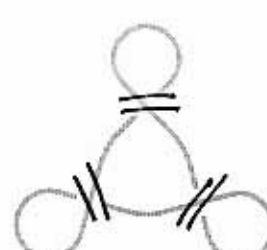
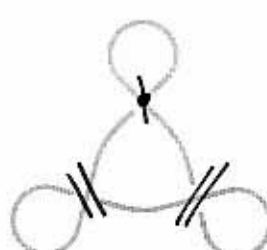
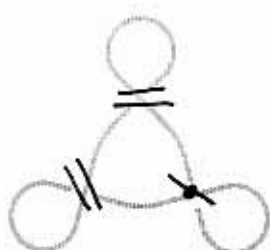
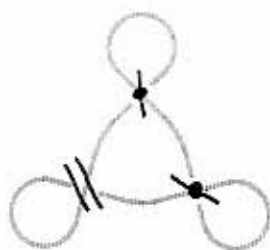
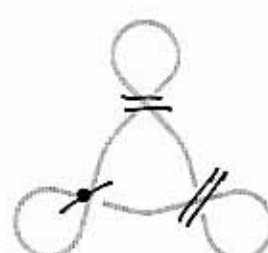
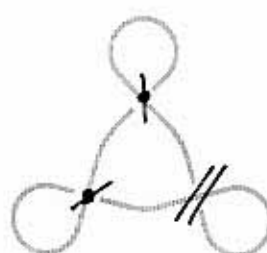
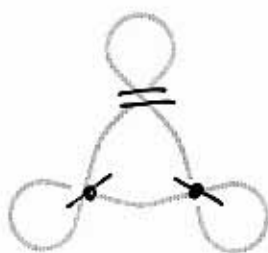
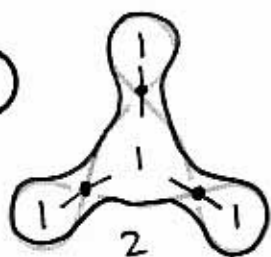
B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
						$\oplus$		$\oplus$		$\oplus$		$+$						
								$+$		$\oplus$								
								$\oplus$		$\oplus$								
								$\oplus$		$\oplus$								
								$+$		$\oplus$		$+$						
								$+$		$\oplus$		$-$						
								$+$		$\oplus$		$-$						



Kauffman: $B^7 - B^3 - A^5$
writhe: $-A^9$ } knotted

B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
						$\oplus$		$\oplus$ $\oplus$ $\oplus$		$+$ $+$ $+$		$\oplus$						
	$+$		$-$	$\oplus$	$\oplus$	$\oplus$	$\oplus$ $\oplus$ $\oplus$	$+$ $+$ $+$		$+$		$-$						
	$+$				$-$	$-$								$-$				

16

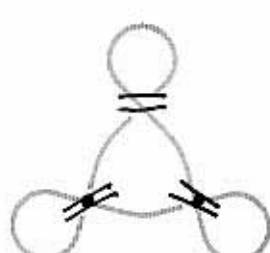
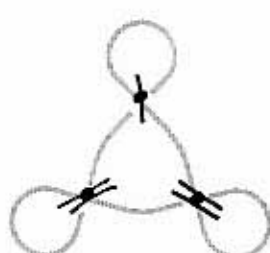
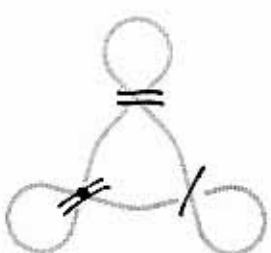
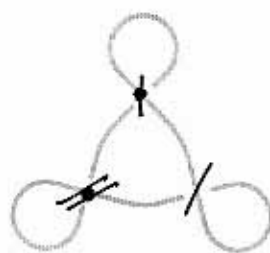
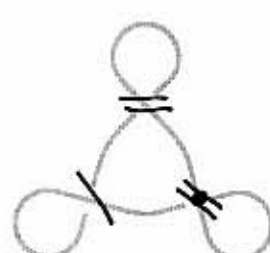
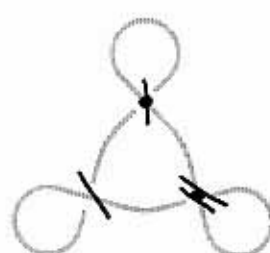
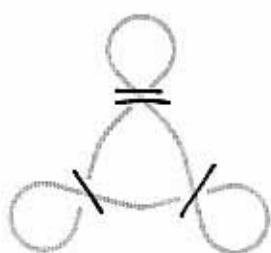
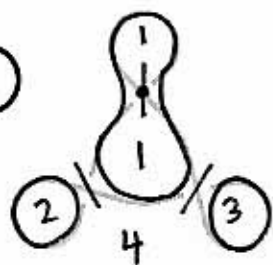
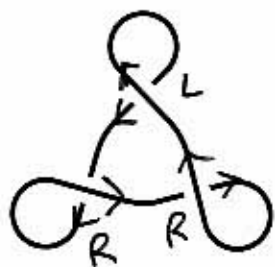


Kauffman: $-B^9$

writhe: -6^9

[illegible]

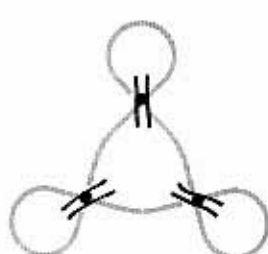
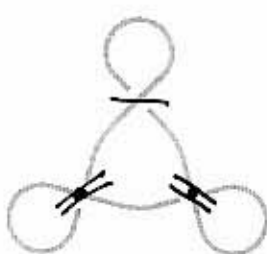
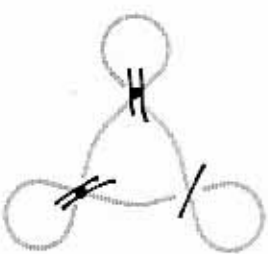
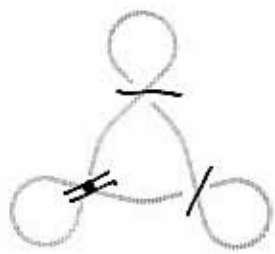
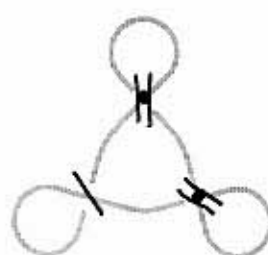
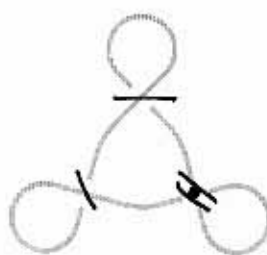
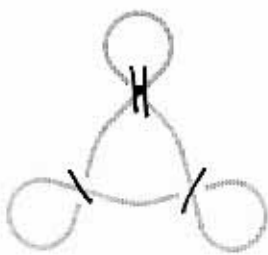
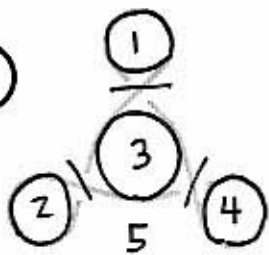
12



Kauffman: $-A^3$

writhe: $-A^3$

B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
						$\oplus$		$\oplus$		$\oplus$		$\oplus$						
								$\oplus$		$\oplus$								
								$\oplus$		$\oplus$								
								$+$		$\oplus$								
						$\oplus$		$\oplus$		$\oplus$		$\oplus$						
								$\oplus$		$\oplus$								
								$\oplus$		$\oplus$								
								$+$		$\oplus$		$-$						
												$-$						

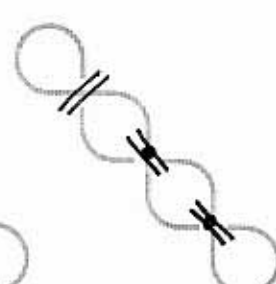
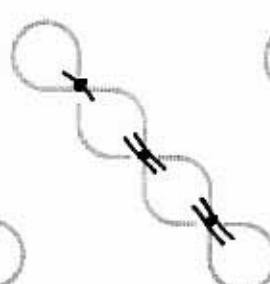
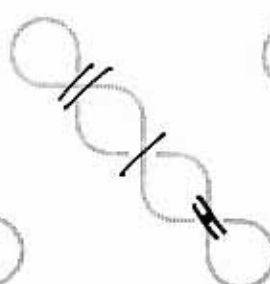
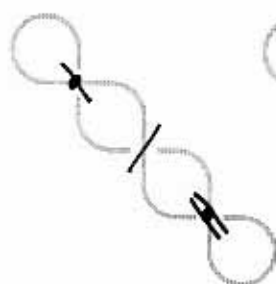
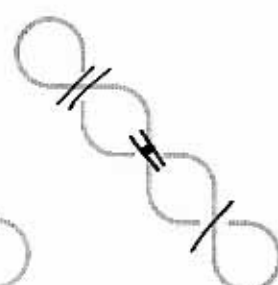
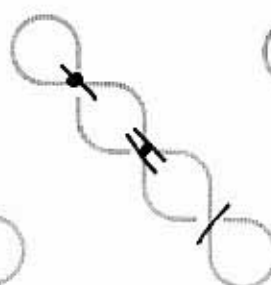
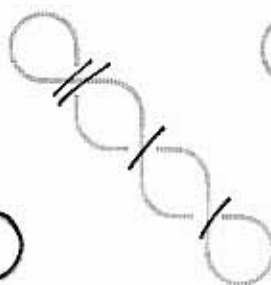
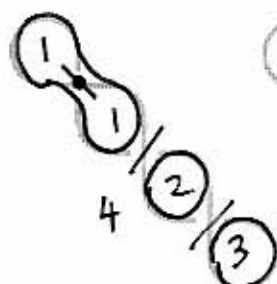


writhe: $-A^9$

[illegible]

writhe: $-B^3$

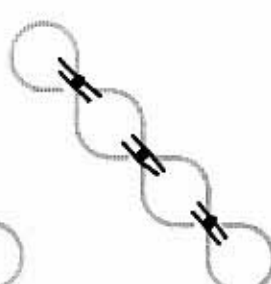
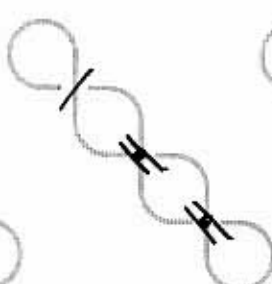
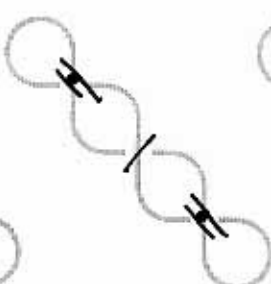
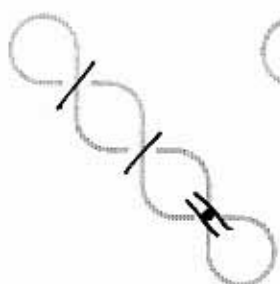
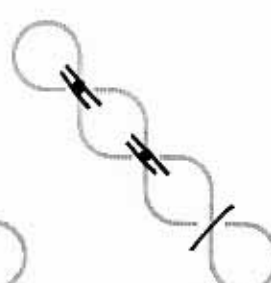
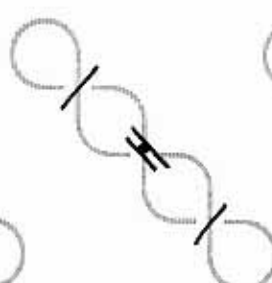
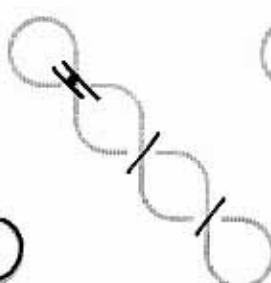
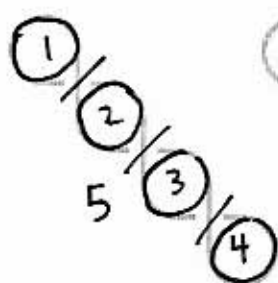
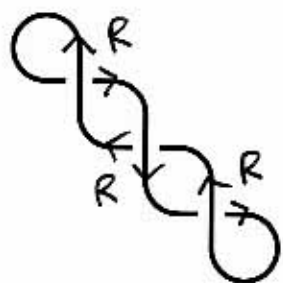
A diagram showing a path starting from a point, moving up and to the right, then forming a loop labeled 'L' (left) that goes up and to the left. The path then continues down and to the right, forming a loop labeled 'R' (right) that goes down and to the left. Finally, the path continues down and to the right, forming a loop labeled 'R' (right) that goes down and to the left, ending at a point.



writhe: $-A^3$

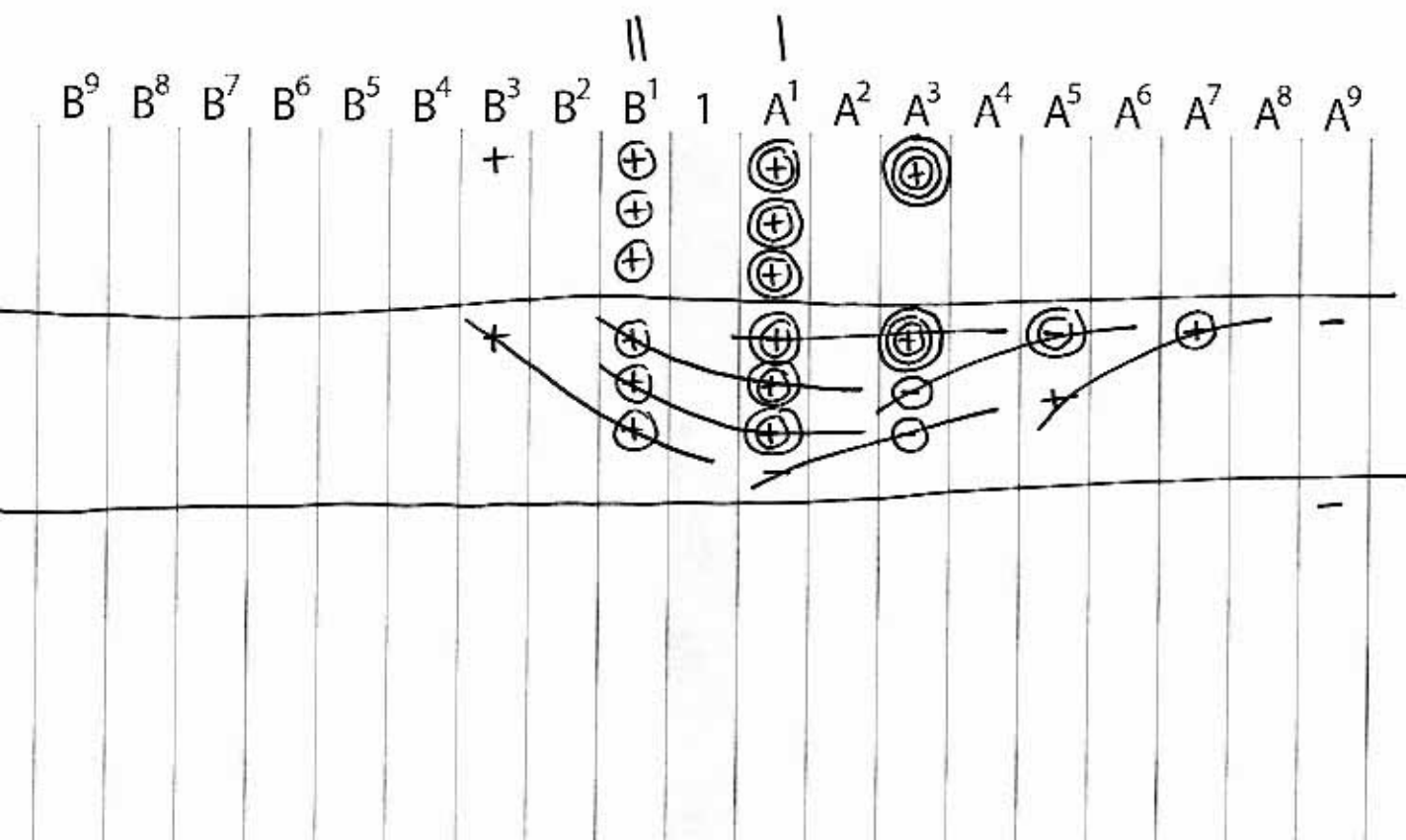
[illegible]

(17)

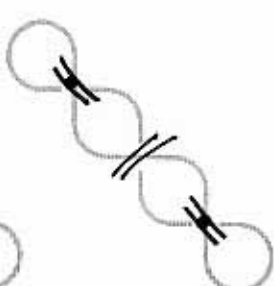
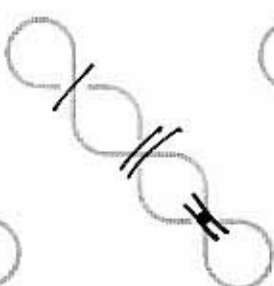
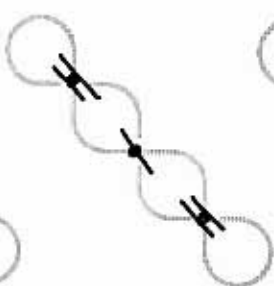
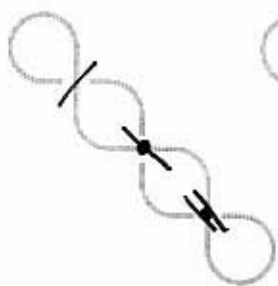
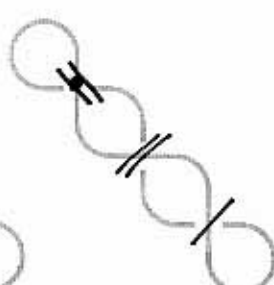
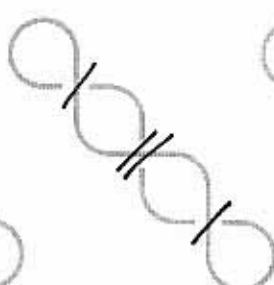
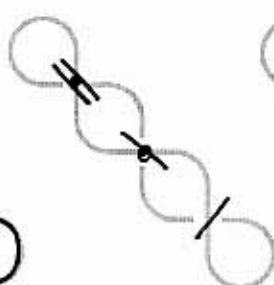
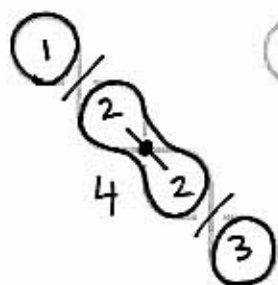
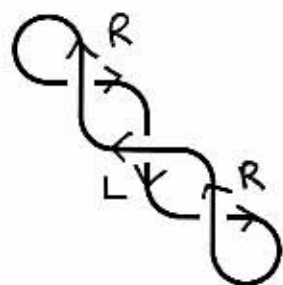


Kauffman: $-A^9$

writhe: $-A^9$



18

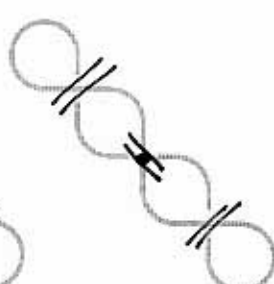
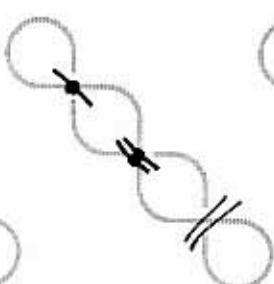
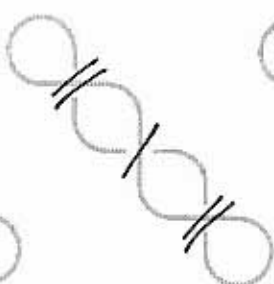
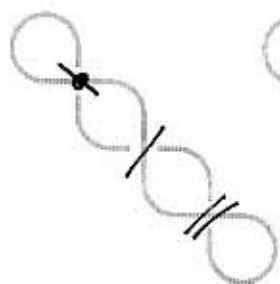
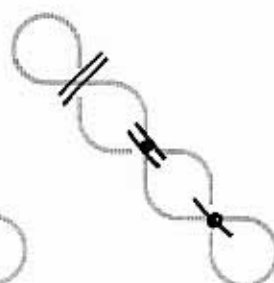
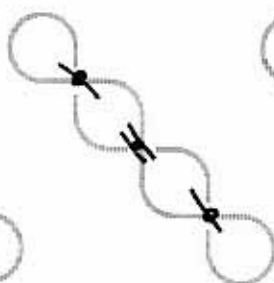
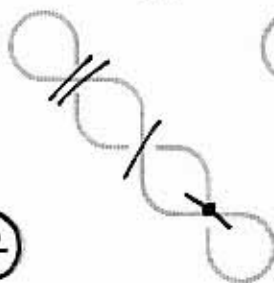
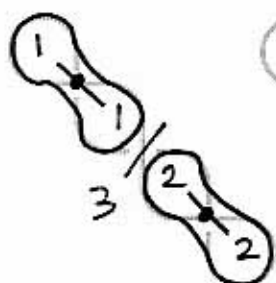
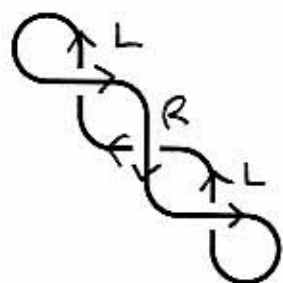


Kauffman: $-A^3$

writhe: $-A^3$

B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
						(+)		(+)		(+)		(+)						
								+		(+)		(+)						
								(+)		(+)								
						(+)		(+)		(+)								
								(+)		(+)								
								(+)		(+)		(+)						
								+		(+)		-						
												-						

19



Kauffman: $-B^3$

writhe: $-B^3$

B^9	B^8	B^7	B^6	B^5	B^4	B^3	B^2	B^1	1	A^1	A^2	A^3	A^4	A^5	A^6	A^7	A^8	A^9
						$\oplus$		$\oplus$		$\oplus$		$\oplus$						
								$\oplus$		$\oplus$								
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