Problem 5:

How does the value of n affect the decipherment accuracy it achieves? Speculate as to why this pattern occurs.

In general, the value of n for the most optimal decipherment accuracy seems to be low, with most of them being optimal with bigrams. The reasoning could possibly be that the frequency of n-grams, where n is greater than 2, are not that common in the texts, where the higher n is, the more susceptible the frequency dictionary is to overfitting. If n is a high enough number, the corresponding n-grams may not appear as frequently in wells.txt, which would worsen the decipherment accuracy as most if not all n-grams would have very low frequencies.

Hill climbing solver seems to have more accuracy than the textbook solver for all ciphers. Using n in the right most column, the hill climbing algorithm produces the following Key/Deciphering accuracies:

Name	Hill-climbing		Textbook		n
	KA	DA	KA	DA	
deer	1.0	1.0	0.69	0.88	4
forest	0.28	0.519	0.0	0.0	2
pangram	0.15	0.25	0.0	0.0	2
tree	1.0	1.0	0.92	0.99	2
woodm	0.272	0.279	0.45	0.58	2
1984	0.125	0.115	0.0	0.0	6
finnegan	1.0	1.0	0.08	0.05	2