

# Quiz 3

Student ID Number:

Name \_\_\_\_\_

Math 173B, 1PM

Please justify all your answers

January 24, 2019

Please also write your full name on the back

1. Below is a Vigenère ciphertext in which some of the repeated trigrams have been underlined. How long do you think the keyword is? Why?

nhqrk	vvvfe	fwgjo	mzjgc	kocgk	lejrj	wossy	wgvkk	hnesg	kwebi
bkkcj	vqazx	wnvll	zetjc	zwgqz	zwhah	kwdxj	<u>fgnyw</u>	gdffgh	bitig
mrkwn	<u>nsuhy</u>	<u>iecru</u>	<u>ljjvs</u>	qlvvw	zzxyv	woenx	<u>ujgyr</u>	kqbfj	lvjzx
dxjfg	<u>nywus</u>	rwoar	xhv vx	ssmja	vkrrt	uhktm	malcz	ygrsz	xwnvl
lzavs	<u>hyigh</u>	rvwpn	ljazl	nispv	jahym	ntewj	<u>jvrzg</u>	qvzcr	estul
fkwis	tfylk	ysnir	rddpb	svsux	zjgqk	xouhs	zzrjj	kyiwc	zckov
qyh dv	<u>rhhny</u>	<u>wqhyi</u>	rjdqm	iwutf	nkzgd	vvibg	oenwb	kolca	mskle
cuwwz	<u>rgusl</u>	<u>zgfhy</u>	etfre	<u>ijjvy</u>	ghfau	wvwt n	xlljv	vywyj	apgzw
trggr	dxfgs	ceyts	tiiih	<u>vjjvt</u>	tcxfj	hciiv	voaro	lrxi j	vjnok
mvr gw	kmirt	twfer	oim sb	qgrgc					

2. Your friend offers you a bet. You roll two six-sided dice. You win \$100 if their sum is five and lose \$12 otherwise. Do you take this bet? How much money do you expect to win or lose if you were to take this bet 25 times?