



Introduction

Greetings and welcome to the UT Invitational 2020! Although the competition is unfortunately not held on campus, we still hope that we can provide you and your team an amazing Science Olympiad experience. Make sure to read this page in its entirety so you can be prepared for what is going to be on the test.

Questions

The questions will be divided primarily into two parts: **Regular** and **Nationals**. Due to the fact that there will be no timed question in this test, we decided to adhere to the national rules so that the scores will be more spread out. Within the regular section, ciphers will be divided into four broad categories that specify a general topic. There are a total of **8604 points** and **31 questions** on this test. Time taken is the initial tiebreaker, followed by the highest value question going down, with regular questions having precedence over national questions. **In short, it is in your best interest to solve most of the regular questions before doing the national questions.**

Supporting Documents and Collaboration

You can access the reference sheet for Codebusters at this link: <https://scilympiad.com/Data/shared/testRefs/CodebustersReference.pdf> (<https://scilympiad.com/Data/shared/testRefs/CodebustersReference.pdf>) (<https://scilympiad.com/Data/shared/testRefs/CodebustersReference.pdf>). **Please print this out before you start the test because we do not want you to leave the browser during the testing period.** If you do not have a printer, write it out on a piece of paper instead. It is highly recommended to set up a video call with your partners **before** you start the test.

Cheating

It is in your best interest to not cheat on this test. Doing so will violate the honor code and will disqualify your team from this event (and possibly prevent future registrations with ATX Scioly). Codebusters is a really neat event and we would hate to do anything negative. Remember, this can be a great learning experience and the satisfaction of successfully solving a cipher is definitely something to look forward to!

Authors

If your team has any questions regarding the test, you can email us at martinmnguyen@utexas.edu and siddhant.arora@utexas.edu. We hope that you find our test at the right difficulty and that we chose our quotes well! Our information will also be displayed when you finish your test, so don't worry about copying this down.

Good luck and make sure to do your best!

Standard Quotes

The regular stuff. These ciphertexts are comprised of quotes that might have some profound meaning and give us a better understanding of the world, or simply just something that's just a little relevant.

1. (350.00 pts)

It was only when I was trying to learn my native language that I realized how hard learning a new language can be, considering all of the wacky rules it can have. Solve this **ARISTOCRAT** which concerns the nature of the spelling of certain words. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

V	D	K	A	V	P	W	V	H	R	V	B	A	E	F	V	X	J	L	T	P	K	V	W	G	A	J	K	L	P	V	W	Y	X	X	V	W	Y	F	O	L	P	
E	A	F	T	E	R	I	E	X	C	E	P	T	W	H	E	N	Y	O	U	R	F	E	I	S	T	Y	F	O	R	E	I	G	N	N	E	I	G	H	B	O	R	
N	V	W	A	F	I	V	W	G	T	P	V	I	J	P	V	R	V	W	Q	V	G	V	W	Y	F	A	R	L	T	X	A	V	P	K	V	W	A	O	V	W	Y	V

N	V	W	A	F	I	V	W	G	T	P	V	I	J	P	V	R	V	W	Q	V	G	V	W	Y	F	A	R	L	T	X	A	V	P	K	V	W	A	O	V	W	Y	V
K	E	I	T	H	L	E	I	S	U	R	E	L	Y	R	E	C	E	I	V	E	S	E	I	G	H	T	C	O	U	N	T	E	R	F	E	I	T	B	E	I	G	E

G	I	V	W	Y	F	G	K	P	L	Z	R	D	K	K	V	W	X	D	A	V	U	D	A	F	V	W	G	A	E	V	W	Y	F	A	I	W	K	A	V	P	G
S	L	E	I	G	H	S	F	R	O	M	C	A	F	F	E	I	N	A	T	E	D	A	T	H	E	I	S	T	W	E	I	G	H	T	L	I	F	T	E	R	S

2. (500.00 pts)

Patristocrats are the bane of our existence, probably because we're not really sure how hard they are until people actually try to solve them. Solve this **PATRISTOCRAT** where the word 'FIRST' appears three times. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

N	P	S	C	V	J	G	N	N	I	D	Z	I	M	I	K	V	H	S	V	G	N	P	S	O	J	D	L	S	G	N	N	P	S	C	V	J	G	N	N	I	C	I	J	K
T	H	E	F	I	R	S	T	T	O	A	P	O	L	O	G	I	Z	E	I	S	T	H	E	B	R	A	V	E	S	T	T	H	E	F	I	R	S	T	T	O	F	O	R	G

V	L	S	V	G	N	P	S	G	N	J	I	U	K	S	G	N	D	U	F	N	P	S	C	V	J	G	N	N	I	C	I	J	K	S	N	V	G	N	P	S	P	D	Z	Z
I	V	E	I	S	T	H	E	S	T	R	O	N	G	E	S	T	A	N	D	T	H	E	F	I	R	S	T	T	O	F	O	R	G	E	T	I	S	T	H	E	H	A	P	P

V	S	G	N
I	E	S	T

3. (100.00 pts)

I really wanted to use the caesar cipher on a quote about Caesar's Pizza, but I guess Julius Caesar works too. Although pizza didn't exist back then, I think he would also appreciate the ability to get a Hot 'N Ready pizza for only \$5! Solve this quote by Julius Caesar which is encrypted with the **CAESAR CIPHER**.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

M	Y	J	X	E	K	J	J	H	Q	Y	D	Y	D	W	,	J	X	U	O	B	Q	S	A	U	T	A	D	E	M	B	U	T	W	U	.	M	Y	J	X	E	K	J
W	I	T	H	O	U	T	T	R	A	I	N	I	N	G	,	T	H	E	Y	L	A	C	K	E	D	K	N	O	W	L	E	D	G	E	.	W	I	T	H	O	U	T

A	D	E	M	B	U	T	W	U	,	J	X	U	O	B	Q	S	A	U	T	S	E	D	V	Y	T	U	D	S	U	.	M	Y	J	X	E	K	J
K	N	O	W	L	E	D	G	E	,	T	H	E	Y	L	A	C	K	E	D	C	O	N	F	I	D	E	N	C	E	.	W	I	T	H	O	U	T

S	E	D	V	Y	T	U	D	S	U	,	J	X	U	O	B	Q	S	A	U	T	L	Y	S	J	E	H	O	.
C	O	N	F	I	D	E	N	C	E	,	T	H	E	Y	L	A	C	K	E	D	V	I	C	T	O	R	Y	.

4. (250.00 pts)

Arguably one of the most important branches of mathematics is statistics, which unites engineers, computer scientists, and physicists alike. Can you encode the following quote about statistics with the **AFFINE** cipher with keys of a = 15 and b = 11?

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

A	S	I	N	G	L	E	D	E	A	T	H	I	S	A	T	R	A	G	E	D	Y	A	M	I	L	L	I	O	N	D	E	A	T	H	S	I	S	A	S	T	A	T	I	S	T	I	C
L	V	B	Y	X	U	T	E	T	L	K	M	B	V	L	K	G	L	X	T	E	H	L	J	B	U	U	B	N	Y	E	T	L	K	M	V	B	V	L	V	K	L	K	B	V	K	B	P

5. (200.00 pts)

To be honest, I don't really understand what this quote means, but it's an interesting one. Solve this quote by George Carlin which was encrypted with the **BACONIAN CIPHER**.

EBRMJ INLHF KGXCD APEBM JVQIT LSHFK OGCDY AEBMJ ILHZF WKGUC
RDANX EBMJI LPHVF KQGTC SDOYA EBMJI LHZWF UKGCD ARNEX PBMJV
QILHT FSKOY GZCDA WEBMU RJILN HXPVF KGQCD ATESB MOJYI LZHF
GWUCD AERNB MXPJV ILQHT SFKOG CDYZW AEUBM RJNIL HXPVF QKGCD
AEBTS MJOIY LHFKG ZCDAE BWMUR

Expected Answer: EIEIO is actually a gross misspelling of the word farm.

6. (200.00 pts)

Don't you love scientific facts? Solve this interesting quote which was encoded with the **MORBIT CIPHER**. You are told that 1=●●, 2=●—, 3=●×, 5=—, 7=×●, and 9=××.

2 7 4 3 6 1 1 8 5 7 2 8 4 7 1 3 8 5 8 2 3 6 5 6 2 4
7 2 7 1 7 7 1 9 1 1 7 6 1 2 7 9 5 4 3 8 7 8 3 6 2
8 2 3 2 1 7 7 1 9 6 1 1 7 8 2 6 7 6 4 4 8 7 2 7 6
2 1 7 4 3 4 5 9 1 1 7 6 1 2 7 9 4 1 3 7 6 2 3 5 7 1
9 2 8 3 4 3 7 2 5 9 2 1 7 8 4 7 1

Expected Answer: Although octopuses have 8 tentacles, they actually have 6 arms and 2 legs.

7. (1.00 pts)

The first of one of our "fun" ciphers, which should help relieve some stress that you might have while taking this test. Looks like you activated my trap card! **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

B	L	Y	L	B	C	Q	L	W	R	R	R	R	R	R	R	R	R	R	I	Q	U
I	T	S	T	I	M	E	T	O	D	D	D	D	D	D	D	D	D	D	U	E	L

Literature Quotes

Books are always good to read. Studies have shown that reading at an earlier age has actually increased the rate people retain information and a higher chance to get a better education. These ciphertexts are composed of quotes that came from books. Now whether we actually read all of those books is a different story...

8. (450.00 pts)

Rick Riordan's Percy Jackson and the Olympians caught my attention as a kid, and it still captivates me today. In fact, a ton of my knowledge about Greek mythology stems from his books. Solve this **ARISTOCRAT** which is a quote from Percy Jackson in the original series. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

X	P	T	S	L	U	Y	E	P	D	W	G	L	U	F	E	G	N	L	J	C	Q	P	U	F	V	C	F	N	C	C	D	W	Z	E	J	C	Y	V	E	P	U	F	L	O
J	U	M	P	I	N	G	O	U	T	A	W	I	N	D	O	W	F	I	V	E	H	U	N	D	R	E	D	F	E	E	T	A	B	O	V	E	G	R	O	U	N	D	I	S
U	E	D	P	O	P	W	M	M	B	T	B	L	F	C	W	E	N	N	P	U	.	C	O	S	C	I	L	W	M	M	B	G	Q	C	U	L	'	T						
N	O	T	U	S	U	A	L	L	Y	M	Y	I	D	E	A	O	F	F	U	N	.	E	S	P	E	C	I	A	L	L	Y	W	H	E	N	I	'	M						
G	C	W	V	L	U	Y	Z	V	E	U	A	C	G	L	U	Y	O	W	U	F	N	M	W	S	S	L	U	Y	T	B	W	V	T	O	M	L	R	C	W	F	P	I	R	.
W	E	A	R	I	N	G	B	R	O	N	Z	E	W	I	N	G	S	A	N	D	F	L	A	P	P	I	N	G	M	Y	A	R	M	S	L	I	K	E	A	D	U	C	K	.

9. (350.00 pts)

Did I actually pick a quote from a random book? You bet! Solve this quote in one of Patrick Rothfuss's books which is encoded as a **K1 ARISTOCRAT**. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

T	S	'	R	S	C	Q	O	P	Q	R	S	T	U	V	R	K	Q	Y	W	V	'	S	W	V	R	K	Q	I	S	C	W	S	S	Q	W	Y	C	P	R	S	C	Q
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

T S ' R S C Q O P Q R S T U V R K Q Y W V ' S W V R K Q I S C W S S Q W Y C P R S C Q
I T ' S T H E Q U E S T I O N S W E C A N ' T A N S W E R T H A T T E A C H U S T H E
G U R S . S C Q M S Q W Y C P R C U K S U S C T V E . T A M U P B T J Q W G W V W V
M O S T . T H E Y T E A C H U S H O W T O T H I N K . I F Y O U G I V E A M A N A N
W V R K Q I , W F F C Q B W T V R T R W F T S S F Q A W Y S . X P S B T J Q C T G W
A N S W E R , A L L H E G A I N S I S A L I T T L E F A C T . B U T G I V E H I M A
O P Q R S T U V W V Z C Q ' F F F U U E A U I C T R U K V W V R K Q I R .
Q U E S T I O N A N D H E ' L L L O O K F O R H I S O W N A N S W E R S .

10. (600.00 pts) You bet we did the same thing for this Spanish quote! Solve this **XENOCRYPT**, which is a translated quote taken from one of Zig Ziglar's books. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

C W C Y D Ñ R K C C W C Y T C Y Z G Y H Ñ O H C C Y Z G Y H C A M H Ñ G D Ñ R K C L G
E R E S L O Q U E E R E S Y E S T A S D O N D E E S T A S D E B I D O A L O Q U E H A
C O Z W G H Ñ C O Z K N C O Z C . S G N A M G Y D Ñ R K C C W C Y T S G N A M G Y
E N T R A D O E N T U M E N T E . C A M B I A S L O Q U E E R E S Y C A M B I A S
H Ñ O H C C Y Z G Y S G N A M G O H Ñ D Ñ R K C C O Z W G C O Z K N C O Z C .
D O N D E E S T A S C A M B I A N D O L O Q U E E N T R A E N T U M E N T E .

11. (650.00 pts) Almost every test has a patristocrat with no hints. This test is no different. Solve this **PATRISTOCRAT**. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

R O W D W D R O L E T V R O L E M S I P L G P D G M R E W R O T Q T G J Q H R E W R O T E
T H I S I S T H E W A Y T H E W O R L D E N D S N O T W I T H A B A N G B U T W I T H A W
O W U X L S
H I M P E R

12. (1.00 pts) The second of our "fun" ciphers has come to the rescue! This one is a popular **word** from a classic Disney movie. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

E L C M T W H Z S B T H U S Z S E O S W M Y C S H Z S A N W S N L E
S U P E R C A L I F R A G I L I S T I C E X P I A L I D O C I O U S

Media Quotes

With technology rapidly advancing, we can watch anything anytime we want. With that in mind, these ciphertexts consists of quotes that are found in videos, whether they are on the internet, or maybe even something you can see on your TV.

13. (500.00 pts)

While misspelled questions are funny to us, they may not be that funny to you. Solve this misspelled **ARISTOCRAT** which was taken from V for Vendetta. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

P H N O Q D D U T J U T E F V G M H N ' X J I H F J , P H O U T J J U T E F V K M H N

P H N O Q D D U T J U T E F V G M H N ' X J I H F J , P H O U T J J U T E F V K M H N
F O U R A L L T H E T H I N G Z Y O U ' V E D O N E , F O R T H E E T H I N G S Y O U
Z E U J T Q X I H F J , Q F I P H N O U T J J H F D M U T J J F V N T Q X J D J P U .
M I T E H A V D O N E , A N D F O U R T H E E O N L Y T H E E N G U H A V E L E F T .

14. (125.00 pts)

During quarantine I decided to start watching anime, which might have been a bad idea. Solve this anime quote that is encrypted with an **AFFINE CIPHER** with $a = 7$ and $b = 456$.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

O N N S M O B R S K K I U Q R L S B E E Q B Y S B Q
A L L I W A N T I S S O M E T H I N G G E N U I N E

15. (200.00 pts)

Have you ever seen a movie that was so bad that you walked out of the theater early? If I went to watch the movie Cats (which may or may not be related to this question), I probably would have. Solve this **VIGENERE** cipher that relates to a movie character with the keyword **ZOOMING**.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

R C B U K E G B S G F P E U T U V F P R M Q S S Z N V K K R G . F P R Y T B F M K R Y
S O N I C R A C E S T H R O U G H T H E G R E E N F I E L D S . T H E S U N R A C E S
S V F A C T N Z P Z G M F Q X T W X T R J V W H T E U O S S Q X W H J R .
T H R O U G H A B L U E S K Y F I L L E D W I T H W H I T E C L O U D S .

16. (300.00 pts)

Cooking shows are often very interesting. On one hand, you have Food Wars. On the other hand, you have people getting yelled at by Gordon Ramsay. Solve this **VIGENERE** cipher that is related to cooking with the keyword **MASTERCHEF**.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

P R S B R N J H X X T E V H M E I K V F U N L A I I K J I X T E V K E Z P P R L D I
D R A I N W H A T S H E D O I N G D R A I N T H E R I C E S H E D R A I N I N G R I
U X A Z V O G T X A F W I I J V A H M N Q H Y U T H M S D I U X A Z V O G T X A F W I I
C E W I T H C O L A N D E R H O W C A N Y O U D R A I N R I C E W I T H C O L A N D E R

17. (250.00 pts)

Viral videos often take the internet by storm. Whether they are innovative, funny, or just downright ridiculous, anything can become a meme for who knows how long. Solve this **POLLUX** cipher referencing a viral video where 7 = ×, 9 = −, 5 = −, 0 = ●, 1 = ×, and 2 = ×.

09007355758759477055870750778978354745587430074770594

70479478743705507855474940747705347875877835078075074

7857053070550705487477457435470594705407477853874734

Expected Answer: Long Pen Apple Pineapple Pen Pineapple Apple Pen

18. (250.00 pts) Red sus. Encrypt this phrase from the popular party game Among Us with the **HILL CIPHER** with an encryption key of **LIAR**.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

R	E	D	V	E	N	T	E	D	H	E	S	I	M	P	O	S	T	O	R
L	Q	T	T	S	N	H	Q	L	P	G	U	C	W	R	E	M	L	E	D

19. (1.00 pts) The third of our "fun" ciphers has snuck up behind us! He must really secretive... **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

V	X	Z	P	.	H	F	G	C	L	V	X	Z	P	.
B	O	N	D	.	J	A	M	E	S	B	O	N	D	.

Punny Quotes

You can't have an amazing (or cringey) test without having some sort of puns in it! These ciphertexts consist of jokes and statements that will either make you laugh out loud, or make you blow air out of your nose because of how bad they really are.

20. (275.00 pts) Being able to play an instrument is pretty exciting until you watch Youtube videos of five year old prodigies. Solve this **ARISTOCRAT** which has the word "TUBA" in it.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

O	S	O	X	A	M	E	F	A	K	J	G	H	J	J	M	T	H	C	J	H	F	O	C	P	A	N	J	Z	N	N	S	T	Q	Z	M	F	O	Z	N	K	H	J	Z	N
D	I	D	Y	O	U	K	N	O	W	T	H	A	T	T	U	B	A	S	T	A	N	D	S	F	O	R	T	E	R	R	I	B	L	E	U	N	D	E	R	W	A	T	E	R
T	N	Z	H	J	G	S	F	R	H	V	V	H	N	H	J	M	C	?	S	J	N	S	Z	O	J	A	T	N	Z	H	J	G	Z	J	G	N	A	M	R	G	S	J	S	F
B	R	E	A	T	H	I	N	G	A	P	P	A	R	A	T	U	S	?	I	T	R	I	E	D	T	O	B	R	E	A	T	H	E	T	H	R	O	U	G	H	I	T	I	N
J	G	Z	C	K	S	U	U	S	F	R	V	A	A	Q	T	M	J	S	C	J	H	N	J	Z	O	O	N	A	K	F	S	F	R	S	F	C	J	Z	H	O	.			
T	H	E	S	W	I	M	M	I	N	G	P	O	O	L	B	U	T	I	S	T	A	R	T	E	D	D	R	O	W	N	I	N	G	I	N	S	T	E	A	D	.			

21. (75.00 pts)

Caesar's Pizza is a great choice, but if you want something healthy, I present to you the the Caesar salad (which probably existed around Caesar's time). Decode the following **CAESAR**-encrypted quote about salad.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

A	V	T	H	R	L	H	N	V	V	K	Z	H	S	H	K	P	Z	A	V	I	L	H	I	Y	P	S	S	P	H	U	A	K	P	W	S	V	T	H	A	P	Z	A	-	
T	O	M	A	K	E	A	G	O	O	D	S	A	L	A	D	I	S	T	O	B	E	A	B	R	I	L	L	I	A	N	T	D	I	P	L	O	M	A	T	I	S	T	-	
A	O	L	W	Y	V	I	S	L	T	P	Z	L	U	A	P	Y	L	S	F	A	O	L	Z	H	T	L	P	U	I	V	A	O	J	H	Z	L	Z	.	A	V	R	U	V	D
T	H	E	P	R	O	B	L	E	M	I	S	E	N	T	I	R	E	L	Y	T	H	E	S	A	M	E	I	N	B	O	T	H	C	A	S	E	S	.	T	O	K	N	O	W
O	V	D	T	B	J	O	V	P	S	V	U	L	T	B	Z	A	T	P	E	D	P	A	O	V	U	L	'	Z	C	P	U	L	N	H	Y	.								
H	O	W	M	U	C	H	O	I	L	O	N	E	M	U	S	T	M	I	X	W	I	T	H	O	N	E	'	S	V	I	N	E	G	A	R	.								

22. (225.00 pts) Solve this punny phrase that is encoded with the **HILL CIPHER**. The decryption matrix is FOOD.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

E	X	S	H	S	B	G	K	L	B	W	K	U	R	R	G	A	T	N	I	X	N	G	K	U	E	Q	E	Y	S	T	F	V	U	P	V
C	H	I	R	O	N	I	S	T	H	E	C	E	N	T	A	U	R	F	O	R	D	I	S	E	A	S	E	C	O	N	T	R	O	L	Z

23. (400.00 pts) Since this section is about puns and this is a baconian cipher, you probably think the quote is about bacon. Sadly, it is not. Solve this **BACONIAN** cipher.

56748 36498 62574 83962 54867 39425 78634 98642 58763 92457
39864 25739 82564 73892 57392 56473 92573 92578 36498 62548
73692 57392 45786 39425 87392 57392 57643 92857 36492 85764
38964 25738 92657 43925 78634 92856 74389 25673 92485 67394
25739 28657 39248 57392 65739 24586 47398

Expected Answer: Most people have an above average number of legs and arms.

24. (1.00 pts) The fourth of our "fun" ciphers! Yikes, whose head just burst through the the door? **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

I	Q	Z	Q	'	G	M	K	I	B	B	V	!
H	E	R	E	'	S	J	O	H	N	N	Y	!

National Questions

In order to compensate for the removal of the timed question and to increase the spread of the scores, there are some national questions below. I would advise doing the quotes above first though...

25. (350.00 pts)

Commonly used today, the RSA cipher is a unique mathematical cipher that takes advantage of the immense amount of computing power required to factor large numbers. We're no supercomputer, however, but with smaller numbers, we can still calculate the values by hand. Compute value of d given $p = 83$, $q = 89$, $n = 7387$, $\phi = 7216$ and $e = 1851$ and explain how you would encode the plaintext "hey". Don't give us the actual ciphertext, an expression is good enough. **[250 points for getting d , 100 points explaining how to encode]**

Expected Answer: (250 points for getting d , 100 points for explaining how to encode). $d = 499$. To translate the message, first convert "hey" into a number by replacing each letter in with its number (0-25): 7424. Then, our encrypted message would be the number $7424^{1851} \bmod 7387$

26. (300.00 pts)

Friends are very important, especially during these times where we can't always meet up in person. Try to make an effort to talk with them, whether it's through texting or video calls. Solve this **AFFINE CIPHER** which is a quote from an English rock band. You are given that the letters JE decrypt to ON.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

I	A	L	Y	L	R	Y	L	Z	R	E	H	I	A	F	E	V	D	I	A	R	I	F	X	J	N	U	G	U	F	P	L	I	J	D	R	H	I	J	H	J	N
T	H	E	R	E	A	R	E	M	A	N	Y	T	H	I	N	G	S	T	H	A	T	I	W	O	U	L	D	L	I	K	E	T	O	S	A	Y	T	O	Y	O	U

W	N	I	F	G	J	E	I	P	E	J	X	A	J	X
B	U	T	I	D	O	N	T	K	N	O	W	H	O	W

27. (325.00 pts)

Have you ever heard something so ludicrous that it's simply stuck in your head? Solve this quote which was an interesting thought on a popular website. It seems that the text OMBKPR corresponds to LEITLO.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

Z	J	B	R	C	W	I	M	Y	H	W	O	V	V	D	S	I	G	T	E	N	H	Q	M	C	S	R	N	A	F	F	V	H	O	Q	D	V	E
I	F	Y	O	U	D	R	I	V	E	O	V	E	A	P	A	N	C	A	K	E	I	T	L	O	O	K	S	M	O	R	E	L	I	K	E	A	

Z	D	N	Y	C	I	,	L	I	G	H	L	H	U	L	D	X	F	Z	H	U	I	P	R	J	I	O	M	B	K	P	R	R	S	L	D	S	U	H	T	B	B	I	D
W	A	F	F	L	E	,	I	F	Y	O	U	D	R	I	V	E	O	V	E	R	A	W	A	F	F	L	E	I	T	L	O	O	K	S	M	O	R	E	L	I	K	E	A

S	I	G	T	E	N	H	.
P	A	N	C	A	K	E	.

28. (225.00 pts)

Crime thrillers are some of the best movies out there; nothing matches the exhilaration of finding out who the criminal is before the movie solves the case. Solve this quote from the movie Revolver which is encrypted with the **POLLUX CIPHER**. You know that 57227452117294221 translates to DONT.

92555426247525224424642245427792112621264652542952914

22692955429792659292274912799246126142655242576425675

22924564247212296112791245**7227452117294221**229572752979

2499

Expected Answer: There is something about yourself that you don't know.

29. (225.00 pts)

The Twilight series introduced me to the concept of shipping wars. Were you on Team Jacob or Team Edward? Solve this quote that is from the Twilight series that is encoded with the **MORBIT** cipher. You are given that the word THEM corresponds to 3288931.

7 1 4 1 9 6 3 6 9 7 9 **3 2 8 8 9 3 1** 4 1 9 8 4 3 8

4 2 6 7 4 1 9 7 4 9 2 7 4 3 2 8 8 9 5 7 4 7 3 2 1 2

4 2 5 4 5 1 2 6 2 4 9 8 5 5 4 2 1 2 8 5 2 9 5 1 9 1 5

1 2 6 5 2 6 4 5 2 4 9 8 5 8 4 5 1 5 4 4 1 3 1 9 3 5

8 6 9 9 7

Expected Answer: You are the most important thing to me now. The most important thing to me ever.

30. (275.00 pts)

League of Legends is a great game. If only FREESM could show up (at least they aren't EU with their 3-0 finals kekww). Decrypt this quote which was encrypted with the **HILL** cipher. The decryption matrix is DEATHSMAN.

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

N	T	P	M	Y	J	V	O	K	Q	V	W	H	O	U	V	S	M	Z	P	X
L	I	V	E	A	N	D	D	I	E	B	Y	T	H	E	B	L	A	D	E	Z

31. (650.00 pts) Let's end the test with a banger. Solve this final quote which is a **XENOCRYPT** which is translated from the Bible. **[FREQUENCY]**

Type your letters below the corresponding given letters. Your letters can be lower or upper case.

E	U	D	F	C	B	F	U	,	K	Q	N	C	D	C	Q	A	R	U	I	T	D	Q	C	L	Y	E	C	K	D	Q	W	C	L	Y	I	C	K	D	Q	,	W
P	O	R	T	A	N	T	O	,	D	E	J	A	R	A	E	L	H	O	M	B	R	E	A	S	U	P	A	D	R	E	Y	A	S	U	M	A	D	R	E	,	Y

L	Q	Y	B	M	D	C	C	L	Y	I	Y	N	Q	D	,	W	L	Q	D	C	B	Y	B	C	L	U	A	C	J	C	D	B	Q	.
S	E	U	N	I	R	A	A	S	U	M	U	J	E	R	,	Y	S	E	R	A	N	U	N	A	S	O	L	A	C	A	R	N	E	.

32. (1.00 pts)

The ultimate tiebreaker! If somehow magically you manage to score the exact same score with the exact same questions with another team (it happened last year at regionals), then whoever gets the closest answer to this question will get the higher placement. Otherwise, this question will not be graded.

What is the fastest speed (in WPM) did I (Martin) type 10 words? For reference, my fastest WPM typing for 15 seconds is 195.87 WPM.

Expected Answer: 241.9 WPM

Congrats on completing this event! Good luck on your other events if you have them!

If you have any feedback on our test, feel free to contact us at martinmnguyen@utexas.edu and siddhant.arora@utexas.edu.

Fill out the feedback form! <https://forms.gle/dAVSu4PxxJPqr3qc6>