

For teachers only

Questions: (* questions can be used for evaluation)

1. Can you identify 6 words hidden in this picture

Answers:



Couch, Straw, Cat, Cord, Mirror, Tiles

Name:

Class:

Div:

Roll. No:



Introduction To Cryptography

Work Sheet: 08-IP-01-WS



2. You are speaking with your friend over phone and suddenly you mother enters the room. You and your friend are very good at encryption and decryption and both know the key as 3.

Encrypt the following conversation using Caesar cipher

You: Can we play cricket at three today?

Friend: Yes we can I will get my new bat

Hint:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
a	B	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	0	1	2	3
d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c

Answer

You : FDQ ZH SODB FULFNHW DW WKUHH WRGDB ?

Friend: BHV ZH FDQ O ZLOO JHW PB QHZ EDW

3. Encrypt the following words using modulo arithmetic. Use the key size as 10

- a) Work
- b) School
- c) Exam
- d) Hint

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	0	1	2	3	4	5	6	7	8	9	10
k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j



Introduction To Cryptography

Work Sheet: 08-IP-01-WS



Character	Position	Encrypted character position	Encrypted character
W	23	$(23+10) \bmod 26 = 33 \bmod 26 = 7$	G
O	15	$(15+10) \bmod 26 = 25 \bmod 26 = 25$	Y
R	18	$(18+10) \bmod 26 = 28 \bmod 26 = 2$	B
K	11	$(11+10) \bmod 26 = 21 \bmod 26 = 21$	U

WORK = GYBU

Character	Position	Encrypted character position	Encrypted character
S	19	$(19+10) \bmod 26 = 29 \bmod 26 = 3$	C
C	3	$(3+10) \bmod 26 = 13 \bmod 26 = 13$	M
H	8	$(8+10) \bmod 26 = 18 \bmod 26 = 18$	R
O	15	$(15+10) \bmod 26 = 25 \bmod 26 = 25$	Y
O	15	$(15+10) \bmod 26 = 25 \bmod 26 = 25$	Y
L	12	$(12+10) \bmod 26 = 22 \bmod 26 = 22$	V

Name:

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Introduction To Cryptography

Work Sheet: 08-IP-01-WS



SCHOOL = CMRYVV

Character	Position	Encrypted character position	Encrypted character
E	5	$(5+10) \bmod 26 = 15 \bmod 26 = 15$	O
X	24	$(24+10) \bmod 26 = 34 \bmod 26 = 8$	H
A	1	$(1+10) \bmod 26 = 11 \bmod 26 = 11$	K
M	13	$(13+10) \bmod 26 = 23 \bmod 26 = 23$	W

EXAM = OHKW

Name:

Class:

Div:

Roll. No: