CS 173, S ₁ Examlet 2	_	$5 \overline{_{ m NET}}$	ID:								
FIRST:				LAST	Γ:						
Discussion:	Monday	9 10) 11	12	1	2	3	4	5		
1. (5 points) Let remainder r of	a and b be integrated and b divided by b	0 /							-	uotient	q and the
2. (6 points) Use	the Euclidean	algorithm	to comp	ute gcd	(170	2, 122	1). S	how	your v	vork.	
3. (4 points) Che	eck the (single)	box that b	est char	acterize	es eac	ch iter	n.				
$-7 \equiv 13 \pmod{8}$	1 5)		${ m tr}$	ue]	false	е				
$\gcd(p,q) = \frac{1}{\operatorname{lcn}}$ $(p \text{ and } q \text{ position})$		true for	all p, q			true	e for	som€	e p, q		

true for p, q prime

Examlet 2	, r ar v B				TACO	П						
FIRST:					LAST	L' :						
Discussion:	Monday	9	10	11	12	1	2	3	4	5		
_	he following clang that it is no positive integer	t.										
2. (6 points) Use	the Euclidean	algori	thm to	comp	ute gcd	(1012	2,299). Sh	ow y	our wo	ork.	
3. (4 points) Che	ck the (single)	box tl	hat bes	st char	acterize	es eac	ch ite	m.				
Zero is a multi	ple of 7.			${ m tr}$	rue		fa	ılse				
	we integers p and q , then p and q .			${ m tr}$	rue]	fa	ılse				

CS 173, S _l Examlet 2		$\frac{5}{N}$	ETII	D:								
FIRST:					LAS	Γ:						
Discussion:	Monday	9	10	11	12	1	2	3	4	5		
1. (5 points) Let remainder r of											uotient q	and the
2. (6 points) Use	the Euclidean	algori	thm to	o comp	oute gcc	1(226)	2,546	5). Sh	ow y	our wo	ork.	
3. (4 points) Che	ck the (single)	box t	hat bes	st char	acterize	es eac	ch ite	m.				
$k \equiv -k \pmod{n}$	7)		ue for a	·		t	rue fo	or son	ne k			
For all prime n two natural nu	numbers p , then mbers q such the				rue	7	fa	alse				

CS 173, S _l Examlet 2		$\frac{5}{N}$	ETII	D:									
FIRST:					LAS'	Т:							
Discussion:	Monday	9	10	11	12	1	2	3	4	5			
1. (5 points) Is t example shows	he following cla		rue? I	nform	ally exp	plain	why	it is,	or g	ive a	concre	te cou	inte
	or all non-zero i		$\operatorname{ers} a$ ar	d b, if	$f a \mid b$ as	$\operatorname{nd} b$	a, t	nen a	= b.				
2. (6 points) Use	the Euclidean	algor	ithm to	o comr	oute gco	1(156	8. 546	i). Sh	ow v	our w	ork.		
(* 1 * * **)		0.5		r			-,		J				
3. (4 points) Che	ck the (single)	box t	hat be	st chai	racteriz	es eac	ch ite	m.					
, ,	()												
gcd(0,0)	0		1		infin	ite		u	ndefi	ned			
If a and b are r	positive integers (a, b)	s and	[-							
then $gcd(b,r)$ =				tı	rue		fa	alse					

CS 173, Sp Examlet 2	_	$5\sqrt{ m N}$	ETII	D:								
FIRST:					LAS	Γ:						
Discussion:	Monday	9	10	11	12	1	2	3	4	5		
1. (5 points) Is the example showing			rue? I	nforma	ally exp	olain	why	it is,	or g	ive a c	concrete	e counter
Claim: Fo	or any positive	$integ\epsilon$	$\operatorname{ers} p$ ar	$\operatorname{ad} q, p$	$q \equiv q \text{ (r)}$	nod 1	.).					
2. (6 points) Use	the Euclidean a	algori	thm to	comp	oute gcd	l(149	5, 221). Sh	ow y	our wo	rk.	
3. (4 points) Chec	ck the (single)	box tl	hat bes	st char	acterize	es eac	ch ite	m.				
If p , q , and k a integers, then g		q		pq		pq	qk [q \S	$\gcd(p, l)$	(c)]
Two positive in prime if and or	ategers p and q and q and q if $gcd(p,q)$ =		latively		rue _		fa	ılse				

FIRST:					LAS	Γ:				
Discussion:	Monday	9	10	11	12	1	2	3	4	5
. (5 points) Is the example showing			rue? Iı	nform	ally exp	olain	why	it is,	or g	give a concre
	ositive integers		p, q, if	$s \equiv t$	\pmod{p}	o) and	$d p \mid a$	q, the	en s :	$\equiv t \pmod{q}$
(6 points) Use	the Euclidean	algori	thm to	comr	uite ged	1(991	199/	I) Sh		zour work
e. (6 points) Use	the Euclidean a	algori	thm to	comp	oute gcd	l(221 ₃	, 1224	l). Sh	now y	your work.
2. (6 points) Use	the Euclidean a	algori	thm to	comp	oute gcd	l(221 ₃	, 1224	l). Sh	now y	your work.
2. (6 points) Use	the Euclidean	algori	thm to	comp	oute gcd	l(221)	, 1224	l). Sh	now y	our work.
2. (6 points) Use	the Euclidean	algori	thm to	comp	oute gcd	l(221 ₎	, 1224	l). Sh	now y	your work.
e. (6 points) Use	the Euclidean a	algori	thm to	comp	oute gcd	l(221)	, 1224	l). Sh	now y	your work.
2. (6 points) Use 3. (4 points) Chec									now y	your work.
									now y	our work.