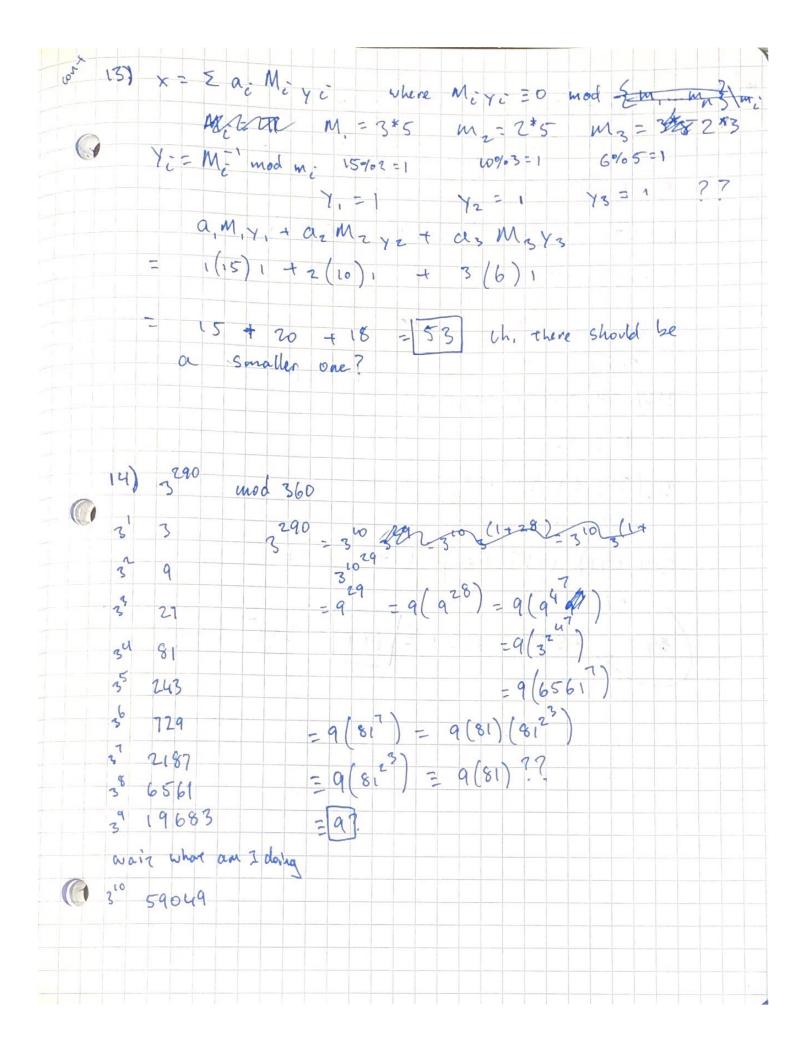
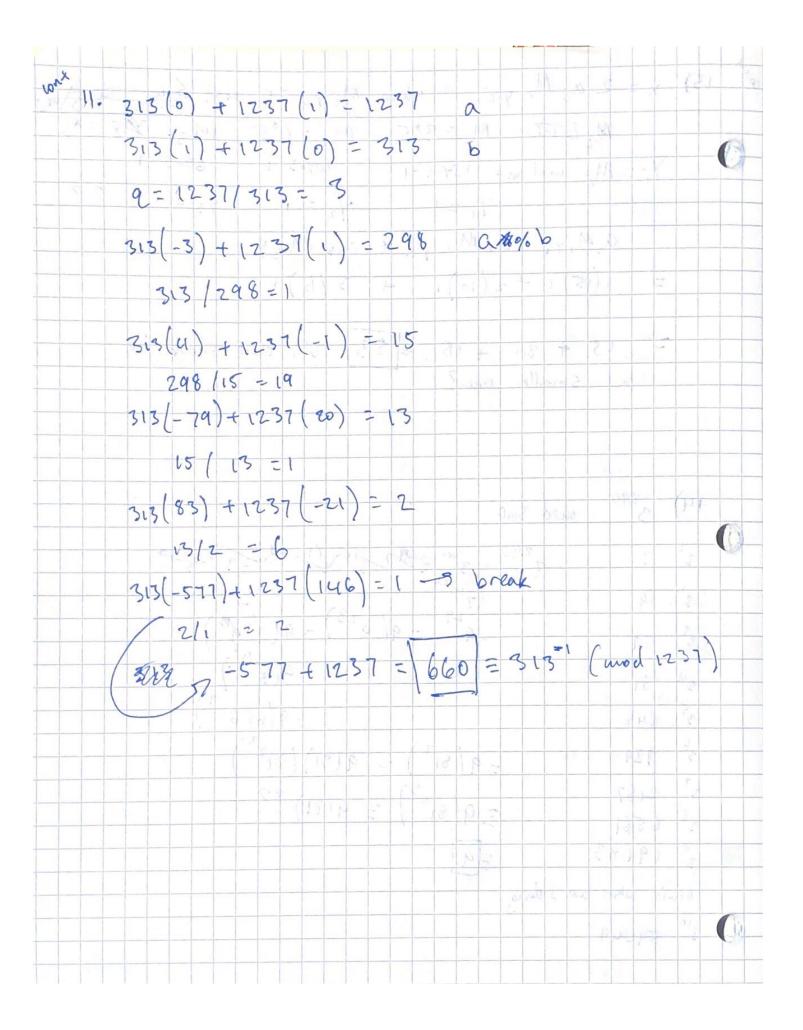
Nov 2020 500 math lest 1) C 2) A 3) 2 apparently you need to u) C 5) B? 6) 2 × 3 * 7 * 11 7)1848 & - 23 *3 *7 *118) x=-3 Y=-2 9) 15 (0) 30030 th) axtby = god (a, b) => ax We always want to visit visit it prime[j]

when prime[j] is the smallest factor in

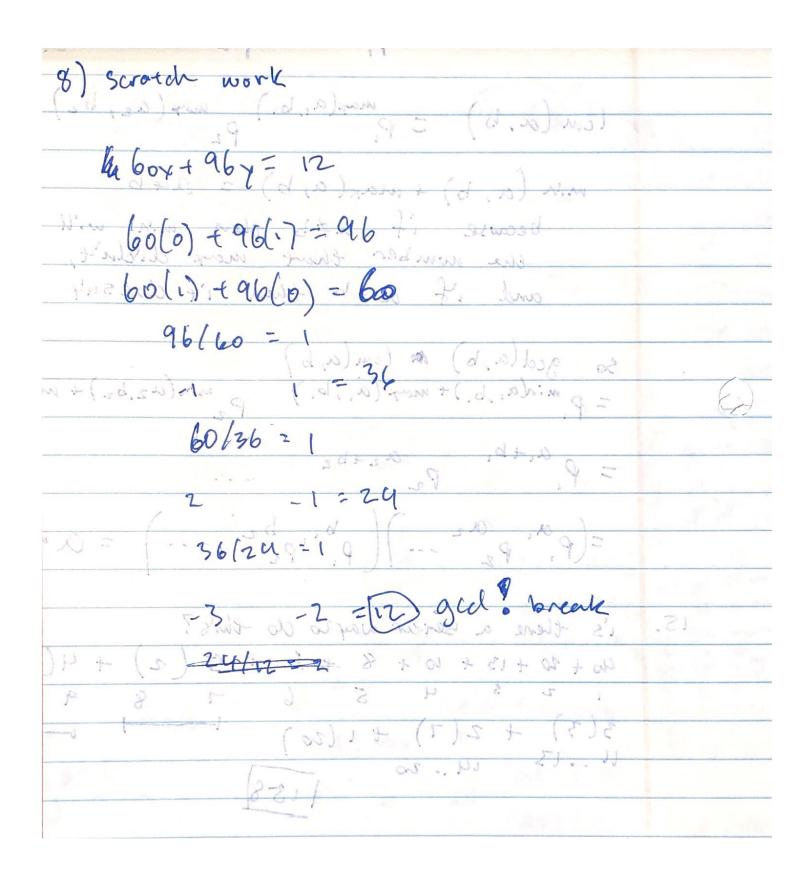
when prime[j]. If this holds, then each number

it prime[j]. If this holds, then each number will only be visited once because each number has exactly one smallest prime factor Suppose for the sake of contradiction that prime [] is not the smallest factor of ix prime(j) The smallest factor most be a prime, because if it were composite that that composite world have prime factors which are smaller. Prime array contains all primes less than prime (j), so a previous iteration of the inner boop must have been the smallest factor
he couse of prime [5] is not smallest factor
seconse factor factor must divide c. however, when the previous i-teration had princ(j) = Smallest factor, the loop would have hit the break condition. thus, princ[5] must be the smallest factor of ix prime [] thus each number is only visited once, so the time complexity is linear 18.2 mu[x] = 0 (prime[j] is a factor) 18.3 mu(X) = ama -1* mu[i] (flip parity) x = i * prime [5]





C	500 moth lest 16
16.	gcd (a,b) = ptoptonps
	$min(a,b_1)$ $min(a_2,b_2)$
	$(cur(a,b) = P_1 \xrightarrow{max(a_1,b_1)} P_2 \xrightarrow{max(a_2,b_2)}$
	m.n (a, b) + max(a, b) = a+b
	the number that max didn't,
	and if a = 6 then lif doesn't marter.
	50 $g(d(a,b)) = (cm(a,b))$ = $p_1 = min(a_1,b_1) + max(a_2,b_2) + max(a_2,b_2)$
	= p min(a, b,) + max(a, b)
	= P. a. + b. P2 P2
	= (pa, pz) (pi-pzs) 02) = a * b
ıs.	is there a sever way to do this?
	40+10+13+10+8+6+5(2)+4(2)
	1 2 3 4 5 6 7 8 9 10
	3(3) + 2(7) + 1(20)
	1420



NU	7/247 = 13/247 ml 2 mld) f(7) = E T
a and w	in very type by 5.11 mans the
12 13 0	14 02 167 1 N 108 7/133
A STATE OF THE STA	47 0 7/184 24 = 3*28
19	50=2×5 56=7*25050=
V	20 = 2 × 3×5 22 * 7 = 14 + 140 = 6
Z qld	1-1 2 3 5 60 08 6 60 (a+b) 46 n - a/6 n-to-6n 2 4 8 16 2 2 3 × 7 × 11
	Zai Mi yilz P-c'x (amod P) [AM