

## Solutions for Task 1-4:

Task 1: Not Balanced

Task 2:  $abc * - de * f * g + /$

Task 3: 33

Task 4: -144

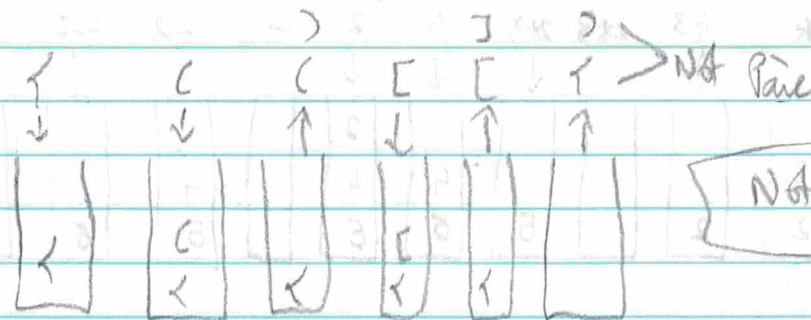
Name: MEETKUMAR PATEL

CS2400.01

PROJECT 2

$$\{a(b * c) / [d + e] / f) - g\}$$

checkBalance



Not Balanced

After

Push('{')

$$(a - b * c) / (d * e * f + g)$$

convertToPostfix

Next Character from Infix Expression

Postfix form

Operator Stack (bottom to top)

(		(
a	a	(
-	a	( -
b	ab	( -
*	ab	( - *
c	abc	( - *
)	abc * -	
/	abc * -	/
(	abc * -	/ (
d	abc * - d	
*	abc * - d	/ ( *
e	abc * - d e	/ ( *
*	abc * - d e *	/ ( *
f	abc * - d e * f	/ ( *
+	abc * - d e * f *	/ ( +
g	abc * - d e * f * g	/ ( +
)	abc * - d e * f * g +	/

abc \* - d e \* f \* g + /

# Evaluate Postfix

$$a=2 \quad b=3 \quad c=4 \quad d=5 \quad e=6$$

$$ab*ca-/de*+$$

a	b	*	*3	2*3	2*3	4	2	-	-2	4-2	4-2	/	/2
↓	↓		↑	↓	↓	↓		↑		↓		↑	
							2						
	3	3				4	4		4		2		
2	2	2	2		5	5	5		5	5	6		6

6/2	6/2	5	6	*	*6	5*6	5*6	+	+30	3+30	3+30	
↓	↓	↓	↓	↑	↓	↓	↓	↑	↓	↓	↓	
			6	6								
	3	5	5	5	5	30	30		3		33	
		3	3	3	3	3	3	3				

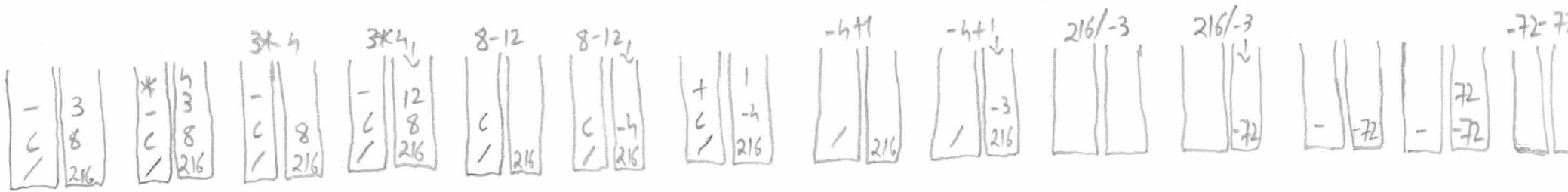
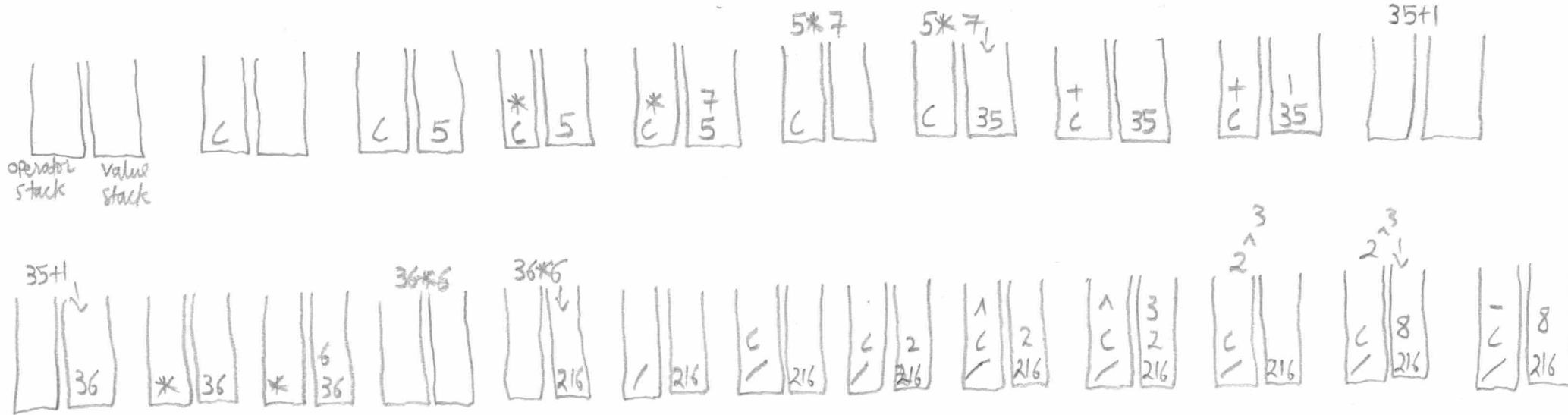
Answer:

33

evaluateInfix

$$(d * f + 1) * e / (a^b - b * c + 1) - 72$$

$$a=2, b=3, c=4, d=5, e=6, f=7$$



| Answer:  $-144$