

1. input

Input	Valid input	No.	Invalid Input	No.
First Number Input	-1.7*10 ³⁰⁸ ~17*10 ³⁰⁸	1	Smaller than -1.7*10 ³⁰⁸	12
			Bigger than 1.7*10 ³⁰⁸	13
	With decimal point	2	Non-number	14
Operators	+	3	All other operators except the + - * / ^ ()	15
	-	4		
	*	5		
	/	6		
	^	7		
	(8		
)	9		
Second Number Input	-1.7*10 ³⁰⁸ ~1.7*10 ³⁰⁸	10	Smaller than -1.7*10 ³⁰⁸	16
			Bigger than 1.7*10 ³⁰⁸	17
	With decimal point	11	Second number input is 0	18
			Non-number	19

2. output

Test Case No.	Input value			Expected Output	Actual Output
	First Num	Operators	Second Num		
1	10	+	1	11.0	11.0
2	22	-	3	19.0	19.0
3	56	*	2	112.0	112.0
4	99	/	33	3.0	3.0
5	3	^	3	27.0	27.0
6	-1.7*10 ³⁰⁸	-	1	Can't Enter	Infinity
7	1.7*10 ³⁰⁸	+	1	Can't Enter	Infinity
8	1	/	0	The divisor cannot be 0	Infinity
9	2	+	n	Can't Enter	Error(1)
10	2.3	/	0.7	3.28571428571	3.2857142857142856
11	-4	*	2	-8.0	Error(2)
12	@			Can't Enter	Error(3)
13	29	^	'	Can't Enter	Error(3)
14	3+(5-2)			6.0	6.0

15	$6*(3+3)$	36.0	36.0
16	$2+2^2$	6.0	6.0
17	$2^{(2+2)}$	16.0	16.0
18	$2/(2-2)$	Can't Enter	Infinity
19	$1.7*10^{308}-1.7*10^{308}$	Can't Enter	NaN
20	$2+)(3$	Can't Enter	Error(3)
21	(0)	0.0	0.0
22	$(1)+(34)$	35.0	35.0
23	$22/(0)$	Can't Enter	Infinity
24	$22^{(0)}$	1.0	1.0
25	$2^{(-1)}$	0.5	Error(3)
26	one+two+three	Can't Enter	Error(4)
27	-4^2	16.0	Error(3)

Error(1): java.lang.NumberFormatException: For input string: "n" 2.0

Error(2): Exception in thread "main" java.lang.NullPointerException at

cpts422.calculator.OperatorNode.Evaluate(OperatorNode.java:24) at

cpts422.calculator.Expression.Evaluate(Expression.java:113) at

cpts422.calculator.Main.main(Main.java:17)

Error(3): Enter expression: " Exception: java.lang.NumberFormatException: For input

string: "" 0.0

Error(4): Exception in thread "main" java.lang.NullPointerException

at cpts422.calculator.OperatorNode.Evaluate(OperatorNode.java:24)

at cpts422.calculator.OperatorNode.Evaluate(OperatorNode.java:30)

at cpts422.calculator.Expression.Evaluate(Expression.java:113)

at cpts422.calculator.Main.main(Main.java:17)