In-Class Activity #3

Suppose the specification of a program is:

s= s+8/(s*2) mod 3 - 4

```
{
    s= s+2;
    s= s mod 3;
    s= s+ 8;
    s= s - 4;
}
```

Test the program using these inputs: 0,1,2,3,4,5,6,7,8

For each input find if there is a failure if yes then find the error that caused it and the fault that caused the error.

For each input find if there is an error and if yes then what type of error is it and find the fault that caused the error.

Find for each fault available in the program regarding to each input when the fault is sensitized and when its not.

ANSWER:

INPUT	Program OUTPUT	Requirement OUTPUT	RESULT
1	4	1	Failure
2	5	6	Failure
3	6	infinity	Failure
4	4	4	
5	5	9	Failure
6	6	infinity	Failure
7	4	7	Failure
8	5	12	Failure

For input 1,2,3,5,6,7,8 the error is a propagated error because it caused a failure but for input 4 the error is Masked error because it did not cause a Failure.

For input 1,2,3,5,6,7,8 the fault is sensitized fault but for input 4 the fault is not sensitized.

The fault is caused due to line 1 ➔ s=s+2.