Testbenching Report for triangle

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Testbench Summary

Component	Total Tests	Passed	Failed
triangle_	4	4	0

Testbench for triangle with parameter(s)

Total tests: 4

Passed tests: 4

Failed tests: 0

Test Case	Input Pi	Input CiPrev	Output Si (Actual)	Expected Si	Status
0	0 (bin) / 0 (dec)	1 (bin) / 1 (dec)	1 (bin) / 1 (dec)	1 (dec)	Passed
1	1 (bin) / 1 (dec)	1 (bin) / 1 (dec)	0 (bin) / 0 (dec)	0 (dec)	Passed
2	1 (bin) / 1 (dec)	0 (bin) / 0 (dec)	1 (bin) / 1 (dec)	1 (dec)	Passed
3	0 (bin) / 0 (dec)	0 (bin) / 0 (dec)	0 (bin) / 0 (dec)	0 (dec)	Passed

Rule: TriangleRule

Input Variables: Pi, CiPrev

Output Variables: Si

Bit Width: 4

Pattern: StringMatchPattern

```
def matches(self, filename):
    #print(self.pattern, filename)
    return self.pattern == filename
```

Generate expected values function:

```
def generate_expected(self, test_case):
    P_bits = [(test_case["Pi"] >> i) & 1 for i in range(self.bit_width)]
    CiPrev_bits = [(test_case["CiPrev"] >> i) & 1 for i in range(self.bit_width)]

    S = [P_bits[i] ^ CiPrev_bits[i] for i in range(self.bit_width)]

    S_int = sum(S[i] << i for i in range(self.bit_width))

    return {
        "Si": S_int
    }
```