Differences:

When calculating f(x) for 2300, the float implementation overflows resulting in NAN. The double implementation is still capable of handling the large numbers required to do 2300^10 and does not overflow resulting in an answer. Its interesting to note that after 10 iterations, the Taylor series expansion is still very far off for the values of the sin(2300) (resulting in answers on the order of e55).

Representation in IEEE 754 Format

```
Float: s e_8 m_23
Float: s e_11 m_52

1:

Float:
- s: 0
- e: 127
- m: 0

Double:
- s: 0
- e: 1023
- m: 0

2300:

Float:
- s: 0
- e: 138
- m: 1032192 (0001111110...0) (rpt. 0 until 52 bits)

Double:
- s: 0
- e: 1034
- m: 554153860399104 (0001111110...0) (rpt. 0 until 52 bits)

-.45:

Float:
- s: 1
- e: -2 -> 127 + -2 = 125
- m: 1100...1100 = 6710886 (rpt. 1100 until 23 bits)
```

```
Double:
- s: 1
- e: -2 -> 1023 + -2 = 1021
- m: (3602879701896396) = 1100...1100 (rpt. 1100 until 52 bits)
```