Goal:

* Compute the integer value of for any rational values

Restrictions:

* Fixed-point infrastructure (integer arithmetic only)
* Execution performance is critical (gas cost per operation)

Solution:

* Rely on the identity
* Use the Taylor series for in order to approximate
* Use the Taylor series for in order to approximate

Implementation:

* Every rational value is represented by an integer numerator and an integer denominator
* Every numerator is scaled up by a factor of , in order to achieve maximum precision

Testing Scheme:

