```
1/1 → 1/2    1/3 → 1/4   1/5 …
     ↙     ↗      ↙     ↗
2/1    2/2    2/3    2/4
  ↓    ↗      ↙      ↗
3/1    3/2    3/3
     ↙      ↗
4/1    4/2
  ↓    ↗
5/1
```

- "**top**" is the numerator, "**down**" is the denominator.
- Notice the pattern of change when you change the direction
- The **counter** variable is tracking how many times you transitioned over the state machine
- This counter is what you can use to know when to "stop" and determine what is the term for a given number x
  - For example, if x = 1 we don't need to make any transition over the state machine (counter = 0)
  - If x = 3, we need to make two transitions (counter = 2)