Fibonacci and the Golden Number

The Fibonacci sequence of numbers can be used to calculate a special number called the golden number. The Greek letter $\Phi(\mathrm{phi})$ is used to represent the golden number.

You will need a calculator to help you to complete the table below. The first few rows have been done for you.

1. Complete the Fibonacci number column.
2. Complete the Calculation and the Golden Number columns

- The calculation is the Fibonacci number divide by the Fibonacci number in the row before.
- The golden number is the result of the calculation. Write down all of the numbers you get on your calculator.

3. Under the table, write what you have noticed about the golden number

| Number | Fibonacci Number | Calculation | Golden Number (Ф) |
| :---: | :---: | :---: | :---: |
| 1 | 0 |  |  |
| 2 | 1 |  |  |
| 3 | 1 | $1 \div 1$ | 1 |
| 4 | 2 | $2 \div 1$ | 2 |
| 5 | 3 | $3 \div 2$ | 1.5 |
| 6 | 5 | $5 \div 3$ | 1.666666666667 |
| 7 |  |  |  |
| 8 |  |  |  |
| 9 |  |  |  |
| 10 |  |  |  |
| 11 |  |  |  |
| 12 |  |  |  |
| 13 |  |  |  |
| 14 |  |  |  |
| 15 |  |  |  |
| 16 |  |  |  |
| 17 |  |  |  |
| 18 |  |  |  |
| 19 |  |  |  |
| 20 |  |  |  |

## I notice that

