



2. Use what you observed above to complete the statement of Binet's formula below.

## Binet's formula for the Fibonacci sequence

Let  $\phi$  be the *golden ratio*. A formula for the  $n$ th term of the Fibonacci sequence is

$$F_n =$$

### Exercise

Use Binet's formula to compute  $F_{40}$ .

### Exercise

The Fibonacci sequence shows up in many places in nature, art, and elsewhere. Do a quick search, and write down three of the places it can be found that you find most interesting.