

## Future Worth (Vectorized)

An amount of money  $P$  is invested in an account where interest is compounded annually. The future worth  $F$  yielded at an interest rate  $i$  after  $n$  years may be determined from the following formula:

$$F = P(1 + i)^n$$

Without using loops, write a *function m-file* which calculates the future worth of an investment for each year from 1 through  $n$ . The function definition is:

```
function F = futureworth_vectorized(P,i,n,plotStatus)
```

Present worth  $P$ , interest rate  $i$ , number of periods  $n$  are inputs along with *plotStatus*, which toggles a plot of  $F$  over the years on or off. The future worth  $F$  is the output.

