Problem solving

Weird and wonderful numbers

When you've been up and down the stairs several times, take time out and try to answer these questions:

1. What did you find at the bottom of the stairs? What number(s) sent you back to the top?
2. Why is there a special condition attached to step one?
3. Will you ever find something else at the bottom of the stairs?

**Strategy options**
- Seek an exception.
- Solve a simpler problem.

**Strategy options**
- Act it out.

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Growth and decay

**Need to Know**

*Exponential growth* is modelled by the formula $A = P(1 + r)^n$.

- $A$ is an accumulated total after a certain number of time periods, $n$.
- $P$ is an initial number. Sometimes, it is useful to think of $P$ as the value of $A$ when $n = 0$.
- $r$ is the growth rate. $r$ is applied to the accumulated total from one time period to the next.