Divergent sequence

If a sequence does not converge, then it is said to *diverge* or to be a *divergent sequence*.

For example, the following sequences all diverge, even though they do not all tend to infinity or minus infinity:

$$1, \ 2, \ 4, \ 8, \ 16, \ 32, \ \ldots$$
$$1, \ 0, \ 1, \ 0, \ 1, \ 0, \ \ldots$$
$$0, \ 1, \ 0, \ 2, \ 0, \ 4, \ 0, \ 8, \ \ldots$$
$$1, \ -2, \ 3, \ -4, \ 5, \ -6, \ \ldots$$

Last updated 05-Jun-17