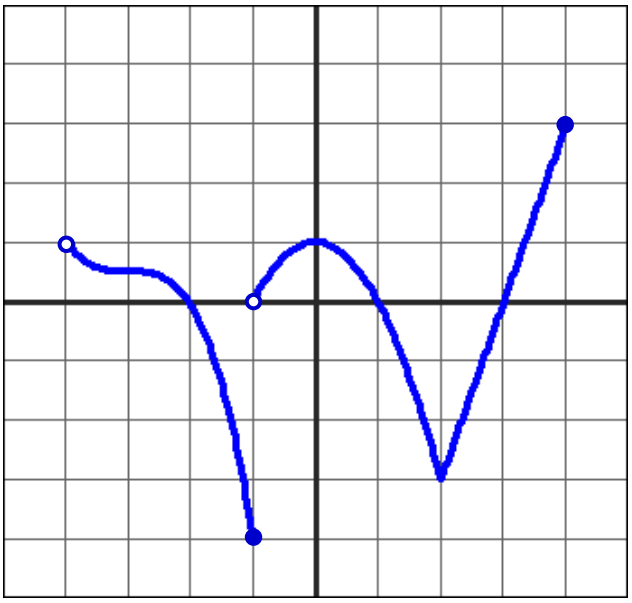
Precalculus 115, section 2.3 Information from the Graph of a Function

notes by Tim Pilachowski

Example A. The graph of a function $f(x)$ is given to the right below.



1) State the domain and range of *f*.

2) Find $f(-2)$, $f(-1)$, $f(2)$, $f(4)$.

3) Identify the *y*-intercept.

4) Identify the *x*-intercepts.

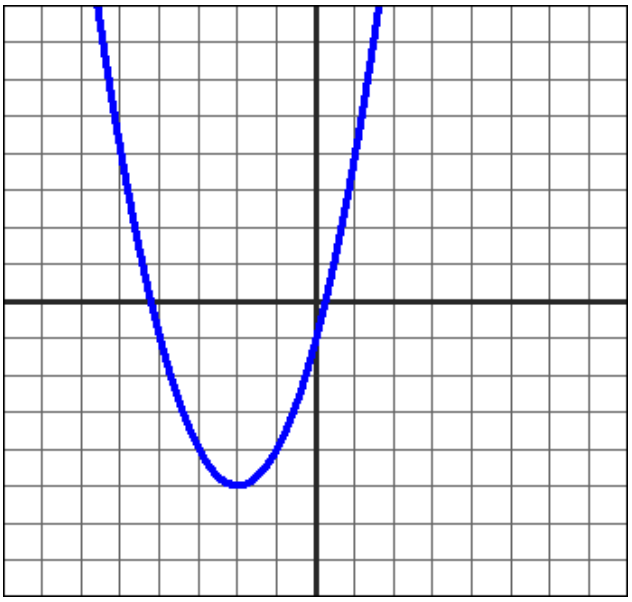
5) Find the values of *x* for which $f(x) \geq 0$.

6) Find the values of *x* for which $f(x) \leq 0$.

7) Determine the interval(s) on which *f* is increasing.

8) Determine the interval(s) on which *f* is decreasing.

Example B. The graph of a function $g(x)$, as seen on a graphing utility, is given to the right below.



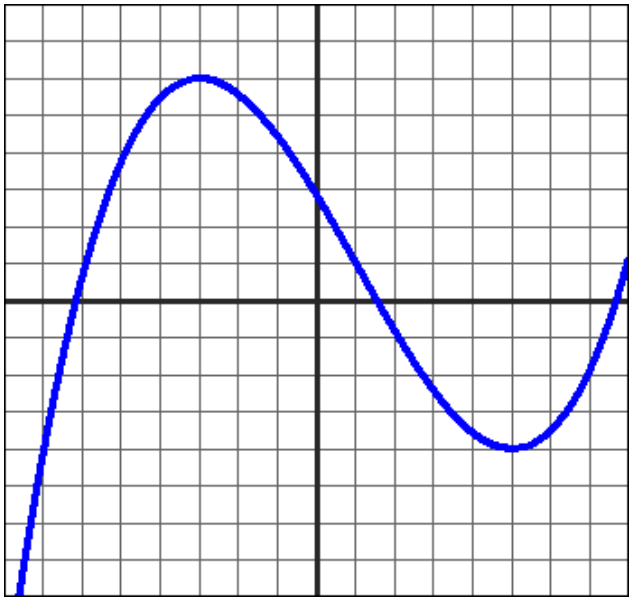
1) Find all local maximum values of *g* and identify the value of *x* at which each occurs.

2) Find all local minimum values of *g* and identify the value of *x* at which each occurs.

3) Determine the interval(s) on which *g* is increasing.

4) Determine the interval(s) on which *g* is decreasing.

Example C. The graph of a function $h(x)$, as seen on a graphing utility, is given to the right below.



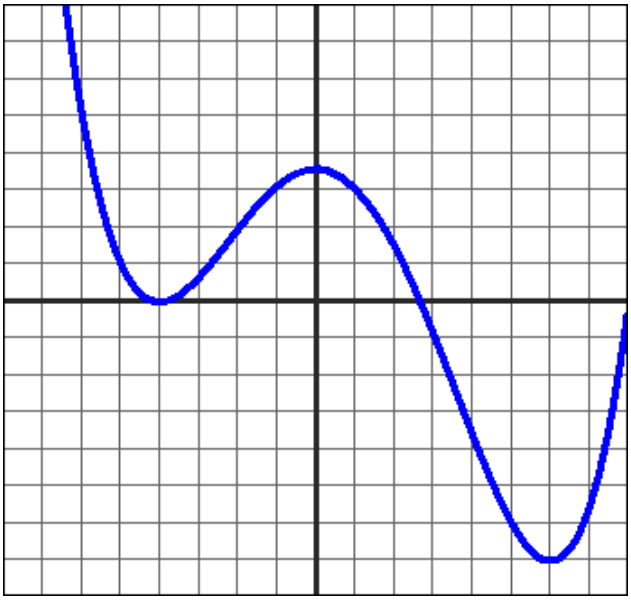
1) Find all local maximum values of *h* and identify the value of *x* at which each occurs.

2) Find all local minimum values of *h* and identify the value of *x* at which each occurs.

3) Determine the interval(s) on which *h* is increasing.

4) Determine the interval(s) on which *h* is decreasing.

Example D. The graph of a function $m(x)$, as seen on a graphing utility, is given to the right below.



1) Find all local maximum values of *m* and identify the value of *x* at which each occurs.

2) Find all local minimum values of *m* and identify the value of *x* at which each occurs.

3) Determine the interval(s) on which *m* is increasing.

4) Determine the interval(s) on which *m* is decreasing.