

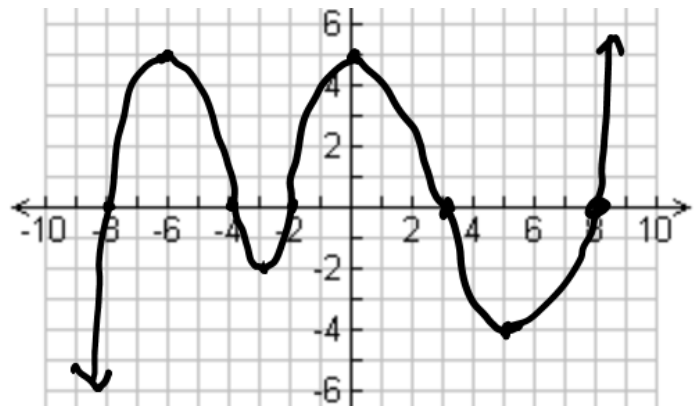
**Objective:** to identify key features of graphs.

**Warm-up:** Explain how the graph of  $f(x) = x^2$  and the graph of  $f(x) = (x + 2)^2 + 3$  are different.

**Example 1:** Use the graph provided to find each of the following

a. x-intercept(s)

b. y-intercept



c. relative maximum(s)

d. relative minimum(s)

e. maximum

f. minimum

g. increasing interval(s)

h. decreasing interval(s)

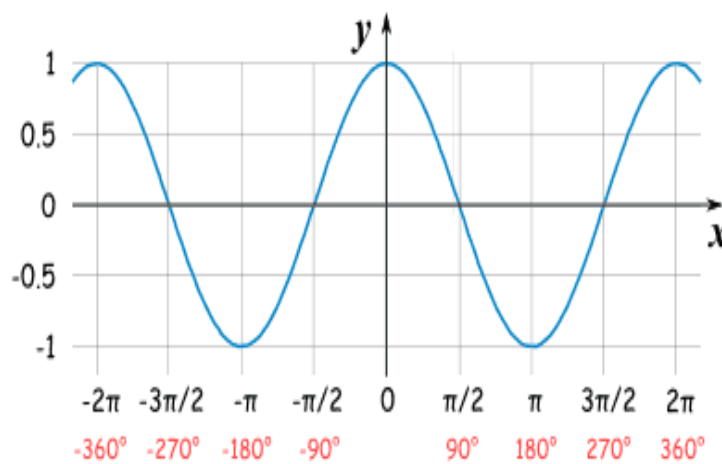
i. end behavior

j. average rate of change from  $-8$  to  $0$

**Example 2:** Use the graph provided to find each of the following

a. x-intercept(s)

b. y-intercept



c. relative maximum(s)

d. relative minimum(s)

e. maximum

f. minimum

g. increasing interval(s)

h. decreasing interval(s)

i. periodicity

j. symmetry

k. average rate of change from  $-\frac{3\pi}{2}$  to  $\frac{\pi}{2}$