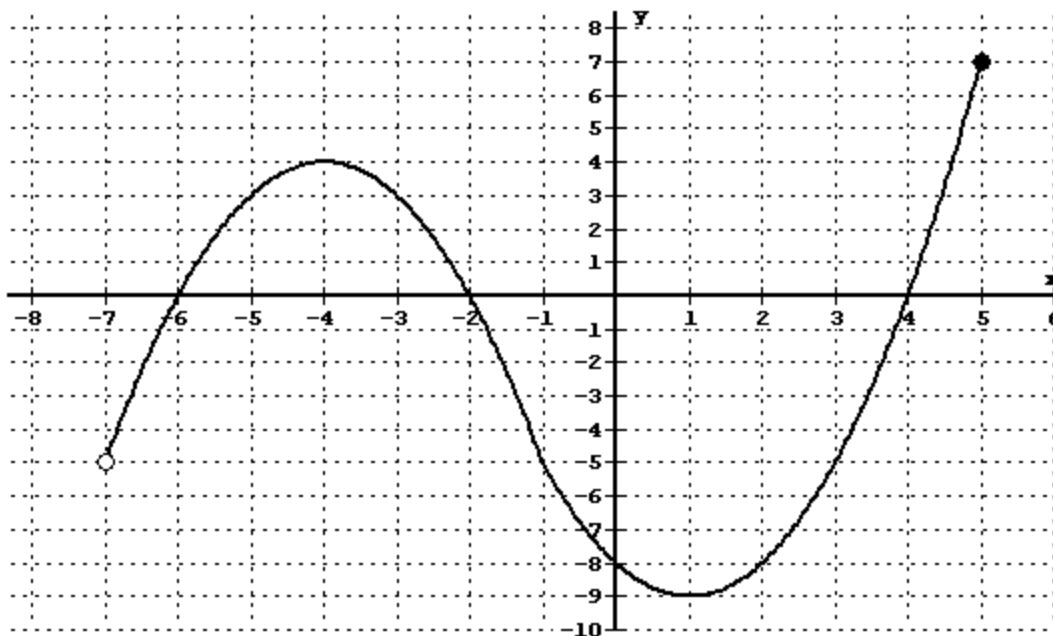


## Analyze the Graph - KEY



1) Viewing Rectangle

Xmin: -8                      Ymin: -10  
 Xmax: 6                        Ymax: 8  
 Xscl: 1                        Yscl: 1

2)  $x$ -intercept(s):  $x = -6, x = -2, x = 4$

3)  $y$ -intercept:  $y = -8$

4) Function? Yes

5) Domain:  $(-7, 5]$

6) Range:  $[-9, 7]$

7) Where does  $f(x) = 0$ ?  $\{-6, -2, 4\}$   
 List the  $x$ -values.

8) Where is  $f(x) < 0$ ?  $(-7, -6) \cup (-2, 4)$   
 State the  $x$ -values, interval notation.

9) Where is  $f(x) \geq 0$ ?  $[-6, -2] \cup [4, 5]$   
 State the  $x$ -values, interval notation.

10)  $f(2) = -8$

11)  $f(-5) = 3$

12) How many times does the line  $y = 2$   
 intersect the graph? 3 times

13) Where does  $f(x) = 4$ ?  $x = -4, x \approx 4.6$   
 List the  $x$ -values

14) Where does  $f(x) = -5$ ?  $x = -1, x = 3$   
 List the  $x$ -values

15)  $f(-1) - f(2) = -5 - (-8) = 3$

16)  $3f(1) = 3(-9) = -27$

17) Absolute Maximum value: 7 (at  $x = 5$ )

18) Absolute Minimum value: -9 (at  $x = 1$ )

19) Relative Maximum value: 4 (at  $x = -4$ )

20) Relative Minimum value: -9 (at  $x = 1$ )

21) Where is the graph increasing?  
 $(-7, -4) \cup (1, 5)$

22) Where is the graph decreasing?  
 $(-4, 1)$   
 State the  $x$ -values, interval notation.

23) Is the Graph a One-to-One Function? NO