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) ∪ (–2,4)
   State the x-values, interval notation.

9) Where is  f(x) ≥ 0 ?  [–6, –2] ∪ [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 ≈ 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) ∪ (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