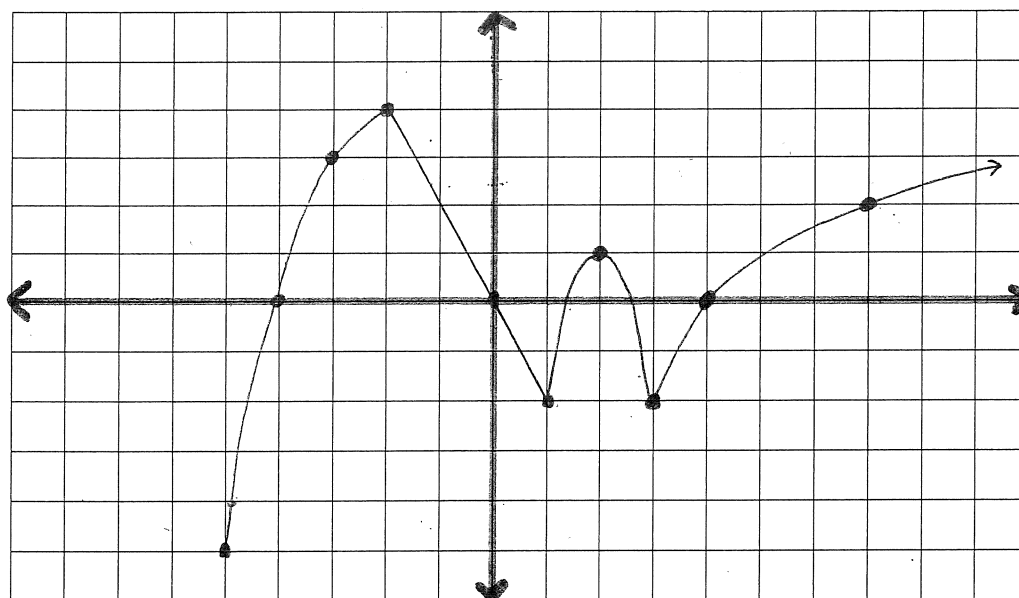Analyze the graph:

1. Is this a function?

yes

2. What is the domain?

$[-5, \infty)$

3. What is the range?

$[-5, \infty)$

4. Where do any relative minimums occur?

$x = 1$ and $x = 3$

5. What is the value any relative minimums?

when $x = 1 \rightarrow y = -2$
when $x = 3 \rightarrow y = -2$

6. Where do any relative maximums occur?

$x = -2$ and $x = 2$

7. What is the value of any relative maximums?

when $x = -2 \rightarrow y = 4$
when $x = 2 \rightarrow y = 1$

8. Where is $f(x) > 0$?

$(-4, 0) \cup (1.5, 2.5) \cup (4, \infty)$

$\swarrow -2$

9. Where is $f(x) \leq 0$

$[-5, -4] \cup [0, 1.5] \cup [1.5, 4]$

10. $(f \circ f)(3) = 4$

11. $2f(-2) + f(1)$

$2(4) + (-2) = 6$

12. For what value(s) does $f(x) = -4$?

$x = -4.9$

13. Where is the graph increasing?

$[-5, -2) \cup (1, 2) \cup (3, \infty)$

14. Where is the graph decreasing?

$(-2, 1) \cup (2, 3)$