The graph of a function $f$ is shown below.

1) At which $x$-values is $f$ zero?

2) On what intervals is $f$ positive?

3) On what intervals is $f$ negative?

4) At which $x$-values is the line tangent to the graph of $f$ horizontal?

5) On what intervals is $f$ increasing?

6) On what intervals is $f$ decreasing?

7) At which $x$-values is $f$ not concave?

8) On what intervals is $f$ concave up?

9) On what intervals is $f$ concave down?
Part 2: Using a graph of $f'$ to answer questions about $f$

The graph of $f'$ is shown below. (Note: this is not the graph of $f$!)

1) At which $x$-values is $f$ zero? (Trick question)
2) On what intervals is $f$ positive? (Trick question)
3) On what intervals is $f$ negative? (Trick question)
4) At which $x$-values is the line tangent to the graph of $f$ horizontal?
5) On what intervals is $f$ increasing?
6) On what intervals is $f$ decreasing?
7) At which $x$-values is $f$ not concave?
8) On what intervals is $f$ concave up?
9) On what intervals is $f$ concave down?
10) At which $x$-values does $f$ have a local max?
11) At which $x$-values does $f$ have a local min?
12) At which $x$-values does $f$ have a point of inflection?