FILL IN THE BLANK   NAME _____

1. If $f(x)$ is increasing, then $f'(x)$ is _____.

2. $f'(x)$ is negative if $f(x)$ is _____.

3. $f''(x)$ is positive if $f(x)$ is _____.

4. $f''(x)$ is negative if $f'(x)$ is _____.

5. If $f(x)$ is concave down, then $f'(x)$ is _____.

6. If $f'(x)$ is increasing, then $f''(x)$ is _____.

7. If $f'(x)$ is decreasing, then $f(x)$ is _____.

8. If $f'(x) > 0$ and $f''(x) < 0$, then $f(x)$ looks like _____.

9. If $f(x)$ is an exponential decay curve, then $f'(x)$ is _____ and

   _____.

10. If $f(x)$ has an inflection point, then $f(x)$ has a change in _____.

11. If $f(x)$ has a horizontal tangent, then $f'(x)$ has a _____.

12. If $f'(a) = 0$, then $f(x)$ has a _____ at _____.

13. If $f'(x)$ has a change of sign and is always defined, then $f(x)$ has either a _____

    or _____.

14. If $f(x)$ has a corner at $x = a$, then $f'(a)$ is _____.

15. If $f'(x) = 0$ for all values of x, then $f(x)$ is _____.

16. If $f''(x) = 0$ for all values of x, then $f(x)$ is _____.

17. If $f'(a) = 2$ and $g(x) = f(x) - 5$, then $g'(a) = $ _____.

18. If $f(x)$ is concave down everywhere, then $-f(x)$ is _____.