FILL IN THE BLANK NAME Key

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

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

3. $f''(x)$ is positive if $f(x)$ is concave up.

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

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

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 increasing. 

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

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

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

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

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

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

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

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

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

$f'' = -a$ everywhere.