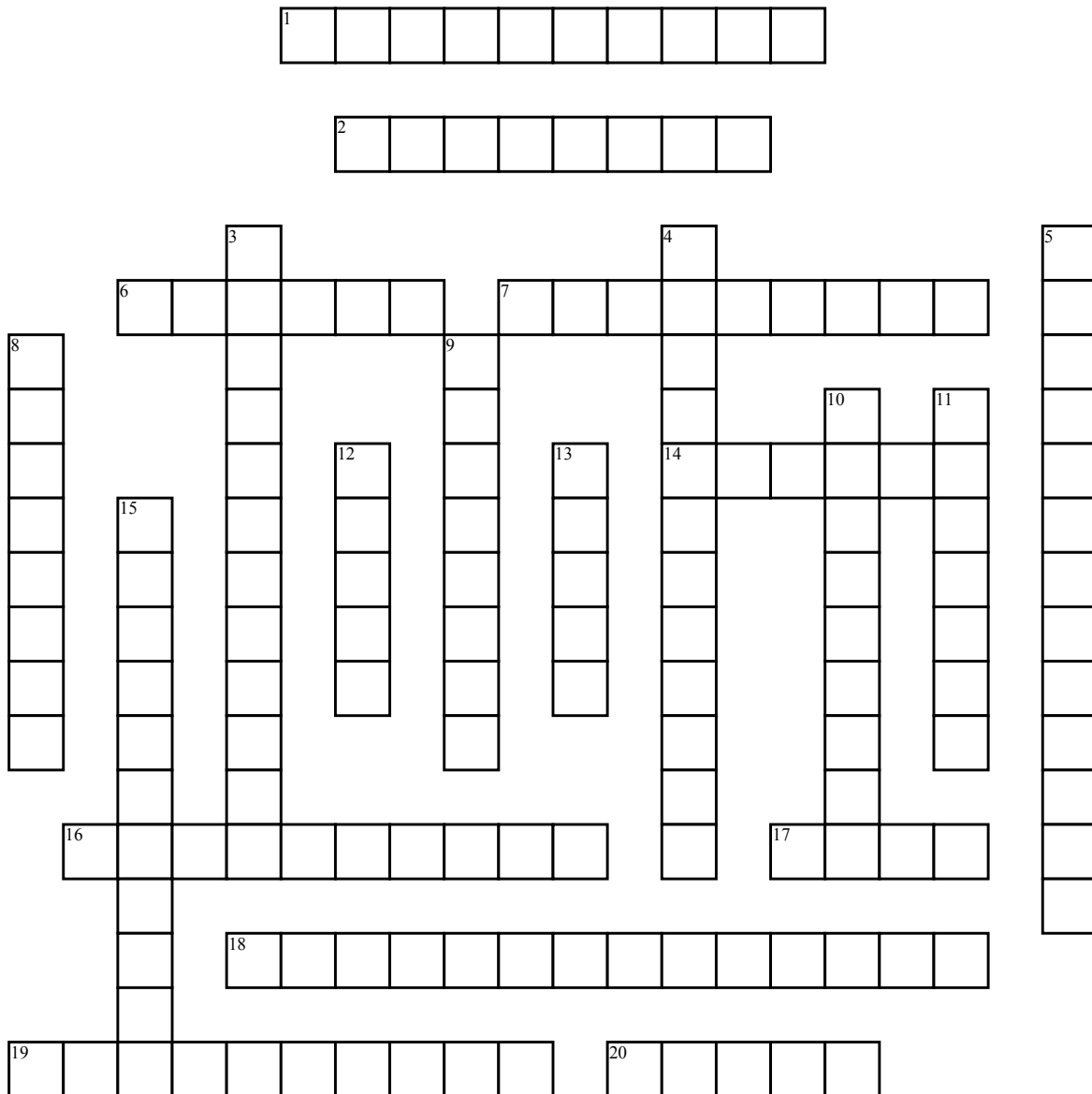


The Calculus Cross



Across

- 1. When $f'(x) > 0$ on a set interval what is the graph doing?
- 2. $\frac{d}{dx} \frac{f(x)}{g(x)} = \frac{[g(x) * f'(x) - f(x) * g'(x)]}{(g(x))^2}$ is the _____ rule
- 6. If $f(x) = 6x^2 = 3x - 2$ the $f'(x) =$ _____
- 7. If $f'(x) > 0$ on a set interval the function is _____ on that interval
- 14. If $f(x) = 2x^3 + 6x^2 - 5$ $f'(x)$ is a _____ function
- 16. When $f'(x) < 0$ on a set interval what is the graph doing?

- 17. If $f(x) = 10$ then $f'(x) =$ _____
- 18. An Oscillating graph is not _____
- 19. If a function is differentiable then the function is _____
- 20. $\frac{d}{dx} [(g(x))^n] = n(g(x))^{(n-1)} * g'(x)$ is the _____ rule

Down

- 3. To solve $f(x) = x^e$ you would use the _____ rule
- 4. What is the second derivative of the position function?
- 5. $f(x) = \frac{(x^2 + 6x + 9)}{(x+5)}$ has a nonremovable _____
- 8. What is the first derivative of the position function?

- 9. limit as x approaches 2^+ on the graph $\frac{1}{(x-2)}$
- 10. $f(x) = \frac{(x^2 + 6x + 9)}{(x+3)}$ has a _____ discontinuity
- 11. $\frac{d}{dx} (f(x)g(x)) = f'(x) * g(x) + f(x) * g'(x)$ is the _____ rule
- 12. Functions that take a _____ turn are not differentiable at that point
- 13. $\frac{d}{dx} (x^n) = nx^{(n-1)}$ is the _____ rule
- 15. If $f'(x) < 0$ on a set interval the function is _____ on that interval