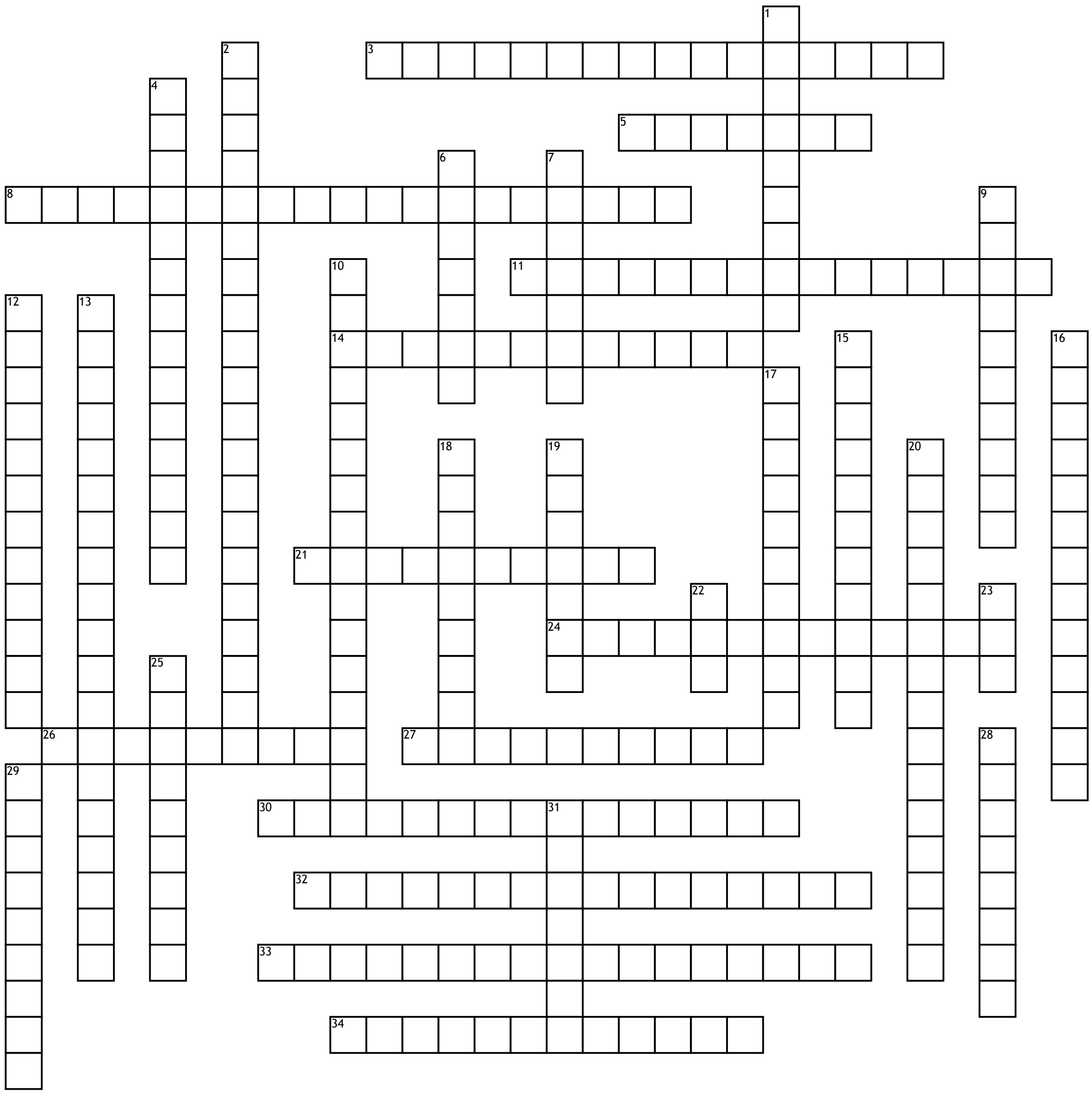
Name: ____ Date: _______

AP Calculus BC crossword



Across

3. $\int f(x)dx$ from a to INF = lim c→INF of $\int f(x)dx$ from a to c

5. A point where f' changes from negative to positive is called a local ________.

8. If f is continuous on a closed interval, then f has both a minimum and maximum on the interval.

11. A point where f'' changes from positive to negative or vice versa.

14. $(\int f(x)dx)/(b-a) = f(c)$. This solves for the ________ _____.

21. When f '(x) is negative, f(x) is

24. $\int F'(g(x))g'(x)dx = F(u) + C = F(g(x)) + C$

26. For a convergent alternating series, the absolute value of the _________ in approximating the sum with the first n partial sums is less than or equal to the value of the first neglected term.

27. $f'(x) = \lim h \to 0\ (f(x+h) - f(x))/h$. Definition of __________.

30. Let sequences $a^n > 0$ and $b^n > 0$. If lim n→∞ a/b = L, where L is finite and positive, then the two sequences either both converge or both diverge. _____ __________ test

32. $\sum f(ci)\Delta xi$, as $\Delta x \to 0$

33. An alternating series $\sum(-1)^n a^n$ converges if lim n→∞ $a^n = 0$ and $a^{n+1} \le a^n$ for all n. ___________ ______ test

34. $f(x) = \sum f^n(c)(x-c)^n/n! + R(x)$, where $f^n(c)$ is the nth derivative of f at c.

Down

1. $\sum ar^n = a + ar + ar^2 + ... = a/(1-r)$ = sum of a ______ series

2. An equation involving the derivative(s) of a function.

4. If $h(x) \le f(x) \le g(x)$ for all x in an open interval containing c, except possibly at c itself, and lim x→c h(x) = lim x→c g(x) = L, then lim x→c $f(x)$ exists and equals L.

6. If lim n→∞ $a^n \ne 0$, then the infinite series $\sum a^n$ diverges. ___ ____ test

7. If a sequence is _______ and monotonic, then it converges.

9. An infinite series is ________ if the sequence of partial sums is ________.

10. $\int f(x)dx$ from a to b = $f(c)(b-a)$.

12. d/dx $f(x)/g(x) = (g(x)f'(x) - f(x)g'(x))/g^2(x)$

13. If the series $\sum|a^n|$ converges, then $\sum a^n$ converges.

15. d/dx $f(x)g(x) = f'(x)g(x) + f(x)g'(x)$

16. A series is _____________ convergent if $\sum a^n$ converges but $\sum|a^n|$ diverges.

17. When f '(x) is positive, f(x) is

18. d/dx x^n = nx^(n-1)

19. A point where f' changes from positive to negative is called a local ________.

20. lim x→c $f(x)/g(x) = f'(x)/g'(x)$, given that f(x)/g(x) is indeterminate at c

22. $\int f(x)dx$ from a to b = F(b) - F(a), where F is an antiderivative of f. ___ fundamental theorem of calculus

23. d/dx ($\int f(t)dt$ from a to x) = f(x). ___ fundamental theorem of calculus

25. d/dx $f(g(x)) = f'(g(x))g'(x)$

28. A function F(x) that satisfies $F'(x) = f(x)$

29. A sequence is ______ if it's terms are either nondecreasing or nonincreasing.

31. The series $\sum$n^(-p) converges if p > 1, and diverges if $p \le 1$.