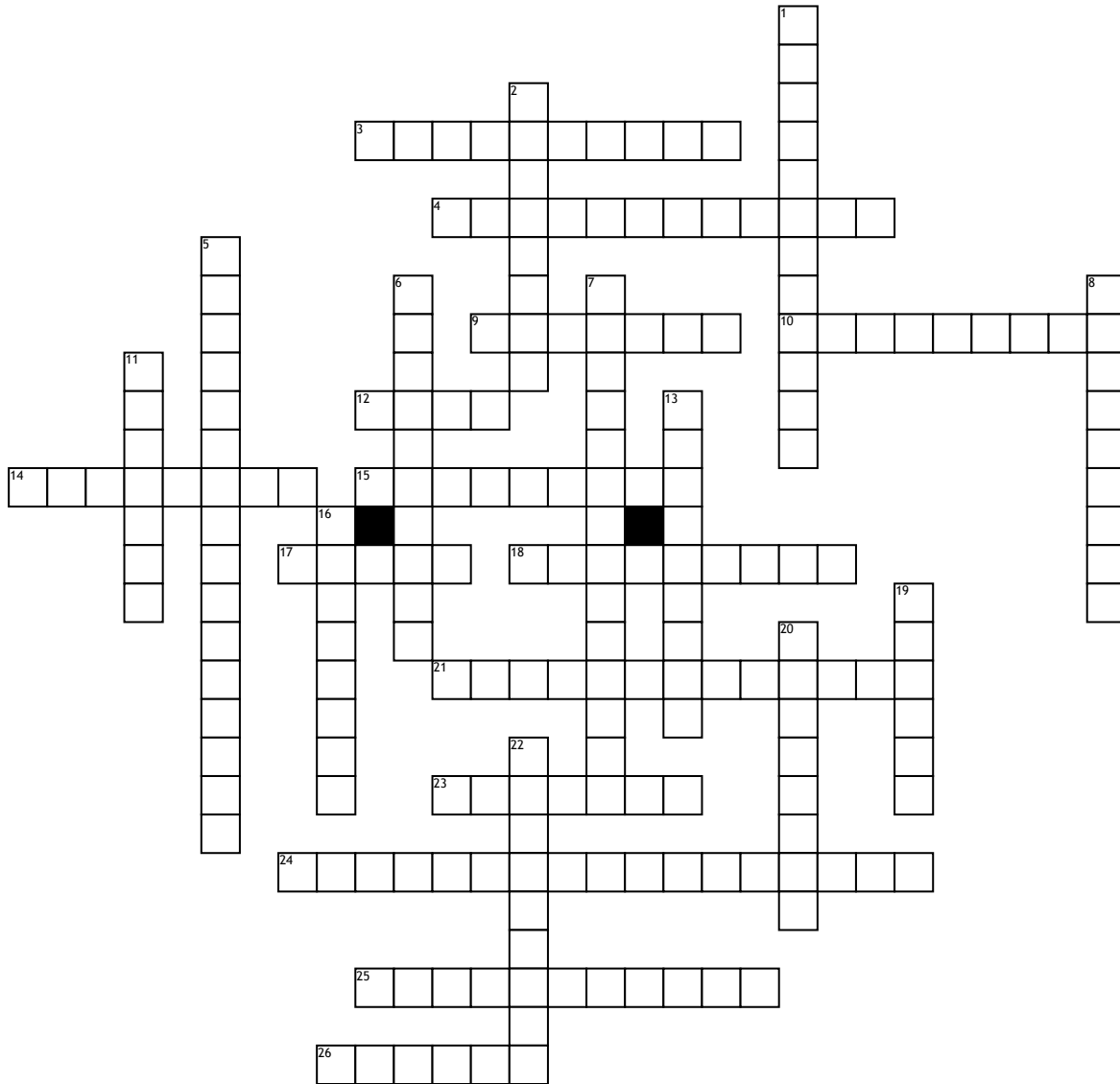


# Calculus BC Crossword



## Across

3. Finding the particular solution to a differential equation involves \_\_\_\_\_ of variables
4. If  $f(2)=-7$  and  $f(8)=4$ , then there must be some value between  $x=2$  and  $x=8$  where  $f$  crosses the  $x$ -axis. This depicts the \_\_\_\_\_ value Theorem.
9. When  $f'(x)$  changes from positive to negative,  $f$  has a relative \_\_\_\_\_.
10. In parametric equations the \_\_\_\_\_ of the velocity vector is another way of saying "speed".
12. Integral  $(f(x)-g(x))$  from interval  $a$  to  $b$  (top-bottom) is the \_\_\_\_\_ between two curves.
14. The integral of  $|v(t)|$  from  $a$  to  $b$  is known as the total \_\_\_\_\_.
15. Any Taylor series that is centered at  $c=0$ , is called a \_\_\_\_\_ series.
17. This test is used to determine the interval and radius of convergence of a series.
18. If the  $f''(x)>0$  on the interval  $(3,6)$ , then the graph of  $f$  is \_\_\_\_\_ on that same interval
21. Another term that refers to slope is the \_\_\_\_\_ velocity.

23. This test only proves divergence if the calculated value for the limit of the function does not equal zero.
24. If a Right Reiman sum is used to approximate a function that is increasing, then the approximation will be an \_\_\_\_\_.
25. This formula is given by multiplying the formula for arc length by  $2\pi(f(x))$
26. This theorem states that if  $f$  is continuous on  $[a,b]$ , differentiable on  $(a,b)$ , and if  $f(a)=f(b)$ , then there's at least one  $\# c$  on  $(a,b)$  such that  $f'(c)=0$

## Down

1. The integral of  $v(t)$  from  $a$  to  $b$  is also known as the \_\_\_\_\_.
2. A point where the first derivative equals either 0 or is undefined.
5. In terms of logistic growth, the population is growing fastest when it is half the value of the \_\_\_\_\_.
6. The speed of a particle is \_\_\_\_\_ when both the velocity and the acceleration of the particle have the same sign.

7. If a function has a discontinuity at  $x=3$ , then the function is also not \_\_\_\_\_ at  $x=3$ .
8. The type of series that has a constant rate ( $r$ ) that each term is being multiplied by.
11. \_\_\_\_\_ fractions are used to integrate when the integrand is a rational function with a factorable denominator
13. In order for an inflection point to exist,  $f''(x)=0$  or  $f''(x)=\text{undefined}$ , and \_\_\_\_\_ must change.
16. When graphing special polar graphs, if  $a/b=1$ , the shape of the graph is a \_\_\_\_\_.
19. The method of calculating volume of revolving solids that involve an outer and inner radius.
20. A particle is moving up and to the right when \_\_\_\_\_ is positive.
22. This rule involves deriving the numerator and denominator as many times as needed when the limit of a function is indeterminate at the  $x$ -value the limit is being evaluated at