Calculus

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|  |  |  | 7  P | S | E | R | I | E | S |  |  |  | F |  |  |  | 8  C | H | A | I | N |  |  |  |  |  |  |  |  |
|  |  | 9  H |  | U |  |  |  |  |  |  |  |  | L |  |  |  | C |  |  | E |  |  |  |  |  | 10  D |  |  |  |
|  |  | A |  | B |  | 11  A | B | S | O | L | U | T | E |  |  |  | E |  |  | M |  |  |  |  |  | E |  |  |  |
|  |  | R |  | S |  |  |  |  |  |  |  |  | C |  | 12  S |  | L |  |  | A |  | 13  D |  | 14  R |  | R |  |  |  |
| 15  L | I | M | I | T |  | 16  I | 17  M | P | L | I | C | I | T |  | E |  | E |  |  | N |  | I |  | O |  | I |  |  |  |
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|  | 18  U | N | I | T |  |  | C |  | 19  V |  | 20  L | H | O | P | I | T | A | L |  | 21  S | H | E | L | L |  | A |  | 22  A |  |
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|  |  | C |  | T |  | 23  T | A | Y | L | O | R |  |  |  | S |  | I |  |  | M |  | G |  | S |  | I |  | Y |  |
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|  |  |  | 24  P | O | L | A | R |  | M |  | 25  Q | U | O | T | I | E | N | T |  | 26  P |  | 27  S | L | O | P | E |  | P |  |
|  |  |  |  | N |  |  | I |  | E |  |  |  |  |  |  |  |  |  |  | A |  |  |  |  |  |  |  | T |  |
|  |  |  |  |  |  |  | N |  |  |  | 28  V | E | L | O | 29  C | I | 30  T | Y |  | R |  |  |  | 31  V | E | C | T | O | R |
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|  |  |  |  |  |  |  |  |  |  | 33  P | O | S | I | T | I | O | N |  |  | 34  M | E | A | N | V | A | L | U | E |  |
|  |  |  |  |  |  |  |  |  | 35  S |  |  |  |  |  | T |  | G |  |  | E |  | S |  |  |  |  |  |  |  |
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|  |  |  |  | 36  P | R | O | D | U | C | T |  |  |  |  | 37  C | O | N | V | E | R | G | E | S |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  | 38  I | N | T | E | G | R | A | L |  |  |  |  | C |  |  |  |  |  |  |  |  |  |
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| **Across**  **2.** list of numbers written in a specific order  **7.** test to determine convergence of a power series  **8.** rule used to differentiate composite functions  **11.** highest or lowest point on the graph; \_\_\_\_\_\_ max/min  **15.** a value that a function approaches as an input approaches some value  **16.** differentiation by separating variables  **18.** a vector of length one along an axis  **20.** rule used to evaluate indefinite forms of limits  **21.** method of finding volume using cylindrical layers  **23.** a series of a function represented as an infinite sum of terms  **24.** an equation of a curve in terms of r and Θ  **25.** rule to differentiate a function composed of a function divided by another function  **27.** how fast a function is increasing or decreasing  **28.** the derivative of position  **31.** a quantity with magnitude and direction  **33.** integral of velocity  **34.** theorem stating if f(x) is defined, continuous, and differentiable on interval [a,b], then there is a c such that a<c<b  **36.** rule to differentiate a function that contains multiplication of two other functions  **37.** approaches a definite limit  **38.** area under a curve | **Down**  **1.** a curve that is uninterrupted  **3.** point of \_\_\_\_\_\_; curve changes concavity  **4.** a form of integration using the chain rule in reverse  **5.** the derivative of velocity  **6.** approximation of the area of a function using rectangles under the curve  **9.** series shown by  **10.** slope or rate of change of a function  **12.** sum of terms in a sequence  **13.** increases to infinity  **14.** theorem stating that a differentiable function that has equal values at point a and point b must have point c with a slope of zero  **17.** a Taylor Series centered around zero  **19.** can be found using Disk/Washer/Shell methods  **22.** a line or curve that a function approaches without ever reaching  **26.** a function that uses two equations to describe a curve  **29.** point(s) at which the derivative equals zero  **30.** a line that touches a curve at a point without crossing it  **32.** method of finding volume by subtracting the volume of the outer solid minus the volume of the inner solid  **35.** a straight line joining two points on a function's curve |