The Perimeter of an Ellipse and New Suggested Formula K

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The perimeter of an ellipse is very difficult to calculate, although it may not seem like it. There are many formulas that approximate the calculation to fairly exact values, but there is no simple formula. The ellipse is a curved geometric figure with two unequal perpendicular axes. Approximation formula 1, although it cannot calculate an exact result, is the most used. For this reason, the use of the K formula is suggested to determine how effective it is by calculating a more accurate result of the ellipse perimeter than the approximation formula 1. With the implementation of (h divides by a plus b) to the K formula, a most exact decimal result. After formula K was created, 90 demonstrations were performed, 30 with each formula. With the K formula, a more exact result could be calculated from the value 7 to 26.67% of the values were more accurate with formula K than with formula 1. Although with approximation formula 1.30% of the values were obtained with a lower percentage of error than with formula K. When the value is 30, it means that it is a perfect circle, in both formulas the same result was obtained (188.495559). Without a doubt, formula K turned out to be effective in calculating a more accurate result in a simpler way.

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