

AP Calculus AB - Continuity and the Intermediate Value Theorem - Quiz

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Name: _____ Class: _____ Date: ____/____/____

Test yourself on continuity, types of discontinuity, making piecewise functions continuous and the Intermediate Value Theorem with 10 multiple-choice questions. Pick one answer for each question, then read the explanation to see why it is right and which common mistake the other choices represent.

AP Calculus AB · Common Core State Standards: **AP CALC AB 1.10, AP CALC AB 1.11, AP CALC AB 1.12, AP CALC AB 1.16**

Remember

- Continuity needs three things: $f(a)$ exists, the limit exists, and they are equal.
- Removable discontinuities are holes; jump discontinuities have different one-sided limits; infinite discontinuities are vertical asymptotes.
- To make a piecewise function continuous, set the one-sided limits equal at the boundary.
- The IVT guarantees a value, but only if the function is continuous on the whole closed interval.