

AP Calculus AB - Concavity and the Second Derivative - Quiz

Common Core AP CALC AB 5.7, AP CALC AB 5.8, AP CALC AB 5.9 · maths-pdf.fr/en/

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

Test yourself on concavity, inflection points, the Second Derivative Test and connecting the graphs of f , f' and f'' 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 5.7, AP CALC AB 5.8, AP CALC AB 5.9**

Remember

- A positive f'' means concave up (slope increasing); a negative f'' means concave down (slope decreasing).
- An inflection point needs a change in the sign of f'' , not just $f'' = 0$.
- Second Derivative Test: $f'(c) = 0$ and a positive $f''(c)$ gives a relative minimum; a negative $f''(c)$ gives a maximum.
- If $f''(c) = 0$ the test fails; use the First Derivative Test.