

AP Calculus AB - Integration by Substitution - Quiz

Common Core AP CALC AB 6.9, AP CALC AB 6.10, AP CALC AB 6.11, AP CALC AB 6.12, AP CALC AB 6.14 · maths-pdf.fr/en/

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

Test yourself on integration by u-substitution for indefinite and definite integrals, long division, completing the square and choosing a technique 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.

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Remember

- Let $u = g(x)$ and $du = g'(x) dx$, then the integral becomes the integral of $f(u) du$.
- Adjust constant factors: if du is off by a constant, divide or multiply to compensate.
- For definite integrals, change the limits to u -values or return to x before evaluating.
- Use long division for improper rational functions and completing the square for irreducible quadratics.