Questions: The quotient rule

Sara Delgado Garcia

Summary

A selection of questions for the study guide on the quotient rule.

Before attempting these questions, it is highly recommended that you read Guide: The quotient rule..

Differentiate the following functions using the quotient rule.

1.1. $\dfrac{e^x}{x}$

1.2. $\dfrac{e^{7x}}{x^5}$

1.3. $\dfrac{\ln(x)}{x^2}$

1.4. $\dfrac{e^{-x}}{x^2+11x-2}$

1.5. $\dfrac{x^3+5x-5}{x^2+3}$

1.6. $\dfrac{\cos(x)}{x^2+3x-1}$

1.7. $\dfrac{\tan(x)}{\cos(x)}$

1.8. $\dfrac{\ln(3x)}{\ln(5)+x}$

1.9. $\dfrac{x^2+3x}{\cos(x)}$

1.10. $\dfrac{\ln(x)}{x^3+3}$.

1.11. $\dfrac{5\tan(x)}{x}$.

1.12. $\dfrac{3x^7-27x^2+2\sqrt{x}}{x^2+1}$.

1.13. $\dfrac{e^{-3x}}{e^{2x}}$.

1.14. $\dfrac{e^3x^3}{e^x}$.

1.15. $\dfrac{x^5}{x^5+1}$.

1.16. $\dfrac{\tan(x)}{\ln(x)}$.

1.17. $\dfrac{3\sin(x)}{\ln(x)}$

1.18. $\dfrac{\tan(x)+5x}{\sec(3x)}$

After attempting the questions above, please click this link to find the answers.

Version history and licensing

v1.0: initial version created 05/25 by Sara Delgado Garcia as part of a University of St Andrews VIP project.