Answers: The product rule

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Summary

Answers to questions relating to the guide on the product rule.

*These are the answers to* [*Questions: The product rule*](../questions/qs-productrule.qmd)*.*

**Please attempt the questions before reading these answers!**

1.1.

1.2.

1.3. As , the function becomes and so

1.4.

1.5.

1.6.

1.7. Take the inside the first bracket so the function becomes . Then

1.8.

1.9. Using the definitions of and :

1.10.

1.11.

1.12. Since , it follows that

since .

1.13. Factorize to get , then

1.14.

1.15.

1.16. Using the product rule twice here:

1.17.

1.18.

1.19. Using the product rule twice:

1.20.

## 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.

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