

Differentiation - Product Rule

Find $f'(x)$.

1. $f(x) = x^2 \sin x$

2. $f(x) = x^3 \cos x$

3. $f(x) = x \tan x$

4. $f(x) = x^4 \sec x$

5. $f(x) = x^5 e^x$

6. $f(x) = \sqrt{x} e^x$

7. $f(x) = x \ln x$

8. $f(x) = \frac{\ln x}{x} = \frac{1}{x} \ln x$

9. $f(x) = \frac{e^x}{x^3} = \frac{1}{x^3} e^x$

10. $f(x) = e^x \sin x$