

Opgavenblad

Nr	Functie	Afgeleide functie	Letter
1	$y = 2x \cdot \ln(x)$		
2	$y = x^3 \cdot \log(x)$		
3	$y = x\sqrt{x+1}$		
4	$y = 3^x \cdot {}^2\log(x)$		
5	$y = 2x\sqrt{3x-1}$		
6	$y = 3x^2 \cdot e^{3x}$		

7	$y = (1 + 2x) \cdot 2^{3x}$		
8	$y = 5x \cdot {}^3\log(x)$		
9	$N = t \cdot \ln(3t)$		
10	$B = 2q(1 + 2^q)$		
11	$R = q\sqrt{3q^2 + 5} - 6q$		
12	$L = 5 \cdot \log(x) + 5x \cdot \ln(x)$		

3	8	11	1	7	9	12	5	6	4	2	10
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Antwoordblad

Nr	Functie	Afgeleide functie	Letter
1	$y = 2x \cdot \ln(x)$	$\frac{dy}{dx} = 2\ln(x) + 2$	M
2	$y = x^3 \cdot \log(x)$	$\frac{dy}{dx} = 3x^2 \log(x) + \frac{x^2}{\ln(10)}$	V
3	$y = x\sqrt{x+1}$	$\frac{dy}{dx} = \sqrt{x+1} + \frac{x}{2\sqrt{x+1}}$	E
4	$y = 3^x \cdot {}^2\log(x)$	$\frac{dy}{dx} = 3^x \ln(3) \cdot {}^2\log(x) + \frac{3^x}{x \ln(2)}$	A
5	$y = 2x\sqrt{3x-1}$	$\frac{dy}{dx} = 2\sqrt{3x-1} + \frac{3x}{\sqrt{3x-1}}$	P
6	$y = 3x^2 \cdot e^{3x}$	$\frac{dy}{dx} = 6x \cdot e^{3x} + 9x^2 e^{3x}$	G
7	$y = (1+2x) \cdot 2^{3x}$	$\frac{dy}{dx} = 2 \cdot 2^{3x} + (1+2x) \cdot 2^{3x} \cdot 3\ln(2)$	E
8	$y = 5x \cdot {}^3\log(x)$	$\frac{dy}{dx} = 5 \cdot {}^3\log(x) + \frac{5}{\ln(3)}$	X
9	$N = t \cdot \ln(3t)$	$\frac{dN}{dt} = \ln(3t) + 1$	N
10	$B = 2q(1+2^q)$	$\frac{dB}{dq} = 2(1+2^q) + 2q \cdot 2^q \ln(2)$	E
11	$R = q\sqrt{3q^2+5} - 6q$	$\frac{dR}{dq} = \sqrt{3q^2+5} + \frac{3q^2}{\sqrt{3q^2+5}} - 6$	A
12	$L = 5 \cdot \log(x) + 5x \cdot \ln(x)$	$\frac{dL}{dx} = \frac{5}{x \ln(10)} + 5\ln(x) + 5$	O

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e	x	a	m	e	n	o	p	g	a	v	e