Wiskundeplan

Rekenvaardigheden: Afgeleiden

Inhoudsopgave

1.0.A Oefeningen niveau 1

Oefening 1.0.1. Bereken de afgeleide van volgende veeltermen

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}(1) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^3\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}(x) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^4\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^5\right) = \ldots\ldots$

Oefening 1.0.2. Bereken de afgeleide van volgende veeltermen

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}(x+1) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}(2x+2) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}(x+2) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}(2x+3) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}(x+3) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}(2x+1) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}(3x+1) = \ldots\ldots$

Oefening 1.0.3. Bereken de afgeleide van volgende veeltermen

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2+1\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2+2x\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2+2\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2+x+1\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2+x\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2+x+2\right) = \ldots\ldots$

Oefening 1.0.4. Bereken de afgeleide van volgende veeltermen

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2x^2\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2x^2+x+1\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2x^2+1\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2x^2+2x+1\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2x^2+x\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2x^2+\pi x+1\right) = \ldots\ldots$

1.0.B   Oefeningen niveau 2

1.0.B   Oefeningen niveau 2

Oefening 1.0.5. Bereken de afgeleide van volgende veeltermen

1. $\dfrac{d}{dx}\left(4x^3 + 2x^2 + 7x + 5\right) = \ldots\ldots$

2. $\dfrac{d}{dx}\left(-3x^3 + 5x^2 - 2x + 8\right) = \ldots\ldots$

3. $\dfrac{d}{dx}\left(7x^3 - 4x^2 + x - 6\right) = \ldots\ldots$

4. $\dfrac{d}{dx}\left(x^3 + 3x^2 + 5x + 7\right) = \ldots\ldots$

5. $\dfrac{d}{dx}\left(-2x^3 + 6x^2 - 4x + 10\right) = \ldots\ldots$

6. $\dfrac{d}{dx}\left(5x^3 - x^2 + 2x + 9\right) = \ldots\ldots$

7. $\dfrac{d}{dx}\left(-x^3 + 4x^2 - 7x + 3\right) = \ldots\ldots$

8. $\dfrac{d}{dx}\left(2x^3 + x^2 - 5x + 4\right) = \ldots\ldots$

9. $\dfrac{d}{dx}\left(-4x^3 + 3x^2 - x + 6\right) = \ldots\ldots$

10. $\dfrac{d}{dx}\left(3x^3 - 2x^2 + 8x - 5\right) = \ldots\ldots$

Oefening 1.0.6. Bereken de afgeleide van volgende veeltermen

1. $\dfrac{d}{dx}\left(4x^4 + 3x^3 + 2x^2 + x + 5\right) = \ldots\ldots$

2. $\dfrac{d}{dx}\left(-2x^4 + 5x^3 - 7x^2 + 4x - 6\right) = \ldots\ldots$

3. $\dfrac{d}{dx}\left(x^4 - 2x^3 + 3x^2 - 4x + 5\right) = \ldots\ldots$

4. $\dfrac{d}{dx}\left(6x^4 - 3x^3 + x^2 - 2x + 7\right) = \ldots\ldots$

5. $\dfrac{d}{dx}\left(-x^4 + 4x^3 - 5x^2 + 2x - 8\right) = \ldots\ldots$

6. $\dfrac{d}{dx}\left(3x^4 - x^3 + 6x^2 - 2x + 9\right) = \ldots\ldots$

7. $\dfrac{d}{dx}\left(-5x^4 + 2x^3 - x^2 + 3x - 4\right) = \ldots\ldots$

8. $\dfrac{d}{dx}\left(2x^4 - 3x^3 + 5x^2 - x + 6\right) = \ldots\ldots$

9. $\dfrac{d}{dx}\left(-4x^4 + x^3 - 2x^2 + 7x - 3\right) = \ldots\ldots$

10. $\dfrac{d}{dx}\left(x^4 + 2x^3 - 4x^2 + 6x - 5\right) = \ldots\ldots$

1.0.B   Oefeningen niveau 2

Oefening 1.0.7. Bereken de afgeleide van volgende veeltermen

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(4x^5 + 3x^4 + 2x^3 + x^2 + 5x + 7\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-2x^5 + 5x^4 - 7x^3 + 4x^2 - 6x + 3\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^5 - 2x^4 + 3x^3 - 4x^2 + 5x - 6\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(6x^5 - 3x^4 + x^3 - 2x^2 + 7x - 8\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-x^5 + 4x^4 - 5x^3 + 2x^2 - 8x + 9\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(3x^5 - x^4 + 6x^3 - 2x^2 + 9x - 4\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-5x^5 + 2x^4 - x^3 + 3x^2 - 4x + 6\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2x^5 - 3x^4 + 5x^3 - x^2 + 6x - 7\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-4x^5 + x^4 - 2x^3 + 7x^2 - 3x + 8\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^5 + 2x^4 - 4x^3 + 6x^2 - 5x + 9\right) = \ldots\ldots$

1.0.C   Oefeningen niveau 3

Oefening 1.0.8.

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(4x^2 + 6\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(5x^3 + 7x - 6\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(5x^4 - 7x\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-2x^3 + x^2 + 4\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(5x^4 - x + 8\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-x^5 + 3x^4 + 2x^2 - 6x + 9\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(6x^3 + 5x - 7\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^4 + 2x^3 - 5\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(7x^2 - 3x + 2\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-4x^5 + x^4 - 2x^3 + 6x^2 - x + 8\right) = \ldots\ldots$

Oefening 1.0.9.

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(3x^3 + 5x - 7\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-4x^4 + x^3 + 2x - 6\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(5x^5 - 7x^2 + x - 8\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^6 - 2x^5 + 3x^4 - 4x^3 + 7\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-2x^3 + 4x^2 - x + 9\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(6x^4 + 5x^2 - 2x + 8\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-3x^5 - 7x^3 + x^2 + 6\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(4x^6 - x^5 + 2x^4 - 3x^3 + 7x^2 - x + 9\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-x^4 + 2x - 4\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2x^6 + x^4 - 7x^3 + 5x^2 - x + 4\right) = \ldots\ldots$

1.0.C   Oefeningen niveau 3

Oefening 1.0.10.

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(5x^3 - 2x^2 + 4x - 7\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-3x^4 + 2x - 6\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(7x^5 + 2x^3 - 8x^2 + x - 9\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^6 + 2x^2 - x + 8\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-2x^3 + 6x^2 - x + 5\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(4x^4 - x^3 + 3x^2 - 2x + 7\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-5x^5 - 8x^3 - 6x + 4\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(3x^6 - 4x^5 + 2x^2 - x + 9\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^3 + 2x^2 - 4x + 6\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-2x^4 + 3x^3 - 5x^2 + 7x - 8\right) = \ldots\ldots$

Oefening 1.0.11.

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(6x^5 + 8x - 7\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-x^6 + 7x^3 - 4x^2 + x - 9\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(5x^3 - x^2 + 7x\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-4x^4 + 2x^3 - 3x^2 + 6x\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(7x^5 - 3x^4 - 8x^2 + 2x\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^6 - 4x^5 + 2x^4 - 6x^3 + 5x^2 - x\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-3x^3 - 2x\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(4x^4 - x^3 + 2x^2 - 5x\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(-2x^5 - 6x\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(3x^6 + 4x^4 - 7x^3 + 2x^2 - x\right) = \ldots\ldots$

2.0.D   Oefeningen niveau 1

Oefening 2.0.12. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\sin x) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\cos x) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}(-\sin x) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}(-\cos x) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}(2\sin x) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}(6\cos x) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}(-\pi\sin x) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}(-4\cos x) = \ldots\ldots$

Oefening 2.0.13. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\sin x + \cos x) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\sin x \cdot \cos x) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{\sin x}{\cos x}\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{\cos x}{\sin x}\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin^2(x)\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\sin(2x)) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{1}{\sin x}\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{1}{\cos x}\right) = \ldots\ldots$

Oefening 2.0.14. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(3\sin^2 x\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(3\cos^2 x\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\cos(\sin x)) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\sin(\cos x)) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\cos(\cos x)) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\tan(3x+1)) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}(\sin(2x)\cdot\sin x) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos(x^2)\cdot\tan(x^2)\right) = \ldots\ldots$

2.0.E   Oefeningen niveau 2

Oefening 2.0.15. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\tan^2 x\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin^3 x\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos^3 x\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{1}{\tan x}\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{1}{\sin^2 x}\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{1}{\cos^2 x}\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\tan(2x)\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\tan(x^2)\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(3x)\cdot\cos(3x)\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos(2x)\cdot\tan(2x)\right) = \ldots\ldots$

Oefening 2.0.16. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(x^2)\cdot\cos(x)\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(x^4 + 2)\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\pi + \cos x\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos x + \pi - sinx\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{\tan(3x^2)}{\sin(3x^2)}\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos^3(2x)\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left((sinx + cosx)^3\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(sin\pi\right) = \ldots\ldots$

Oefening 2.0.17. Bereken de afgeleide

2.0.E Oefeningen niveau 2

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(4x+1)\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos(5x-3)\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(\cos x)\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos(\sin x)\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\tan(\tan x)\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin^2(\cos x)\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos^2(\sin x)\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x\sin x\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x\cos x\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x\tan x\right) = \ldots\ldots$

Oefening 2.0.18. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin x + x^2\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos x + x^3\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin^2 x + x^4\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos^2 x + x^5\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x\sin^2 x\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x\cos^2 x\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(2x) + x^2\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos(3x) + x^3\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\tan(x^2+1)\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin^2(3x)\right) = \ldots\ldots$

2.0.E   Oefeningen niveau 2

Oefening 2.0.19. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos^2(4x)\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(x)\cdot\cos(x^2)\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(x^2)\cdot\cos x\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin(\cos(x^2))\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos(\sin(x^3))\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2\sin x\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^3\cos x\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^4\sin(2x)\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^5\cos(3x)\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^2}{\sin x}\right) = \ldots\ldots$

Oefening 2.0.20. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{\tan x}{x}\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^3}{\cos x}\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x}{\sin x}\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^2}{\cos x}\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^3}{\sin x}\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x}{\cos x}\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^4}{\sin(2x)}\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^5}{\cos(2x)}\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\tan(x^3+x)\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2\sin(x^2+1)\right) = \ldots\ldots$

2.0.F   Oefeningen niveau 3

Oefening 2.0.21. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^6}{\sin(3x)}\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^3\cos(x^4+x)\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\tan(x^5+x^3)\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^4}{\cos(x^3+x)}\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2\sin(x^4+x^2)\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\cos(x^2+\sin x)\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\sin^3(x^2+2x)\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^3\cos^2(x^2)\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\dfrac{x^5}{\sin^2(2x)}\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\tan^2(x^3+x)\right) = \ldots\ldots$

3.0.G   Oefeningen niveau 1

3.0.G   Oefeningen niveau 1

Oefening 3.0.22. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^x\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(2e^x\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(3e^x\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^x + 1\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^x + 2\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^x + e^x\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(3e^x - 10e^x\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^\pi\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\pi e^x\right) = \ldots\ldots$

Oefening 3.0.23. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^2x\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{-x}\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{x^2}\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(xe^x\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2e^x\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{2x+1}\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^\pi e^x\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{\sin x}\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{\cos x}\right) = \ldots\ldots$

Oefening 3.0.24.

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\ln x\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\ln(2x)\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\ln(x^2)\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\ln(3x + 1)\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\ln(x^3 + 4)\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x\ln x\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2\ln x\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\ln(\sin x)\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\ln(x^2 + 1)\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(\ln(e^x)\right) = \ldots\ldots$

3.0.H Oefeningen niveau 2

Oefening 3.0.25. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{3x}\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{-2x}\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{x^3}\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(xe^{x^2}\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^3e^x\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{3x+5}\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^x + e^{-x}\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{\sin(2x)}\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{\cos(3x)}\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{x^4+x}\right) = \ldots\ldots$

Oefening 3.0.26. Bereken de afgeleide

1. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^x \cdot e^x\right) = \ldots\ldots$

2. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{x+e^x}\right) = \ldots\ldots$

3. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(xe^{x^3}\right) = \ldots\ldots$

4. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{x^2+4x}\right) = \ldots\ldots$

5. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(xe^{2x}\right) = \ldots\ldots$

6. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{\tan x}\right) = \ldots\ldots$

7. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{\ln x}\right) = \ldots\ldots$

8. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(e^{x^3+x^2}\right) = \ldots\ldots$

9. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(x^2e^{x^2}\right) = \ldots\ldots$

10. $\dfrac{\mathrm{d}}{\mathrm{d}x}\left(xe^{x+1}\right) = \ldots\ldots$

Oefening 3.0.27. Bereken de afgeleide

1. $e^{\cos^2 x} = \ldots\ldots$

2. $e^{\sin^2 x} = \ldots\ldots$

3. $e^{x+e^x} = \ldots\ldots$

4. $x^3e^{x^2} = \ldots\ldots$

5. $e^{\tan^2 x} = \ldots\ldots$

6. $xe^{x^4} = \ldots\ldots$

7. $e^{\ln(x^2)} = \ldots\ldots$

8. $e^{\cos(x^2)} = \ldots\ldots$

9. $e^{x+e^{x^2}} = \ldots\ldots$

10. $e^{\sin(x^3)} = \ldots\ldots$