

# Oefeningen algebra

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**Naar aanleiding van so:**

1.  $S_{y=-x} : y = 2x^2 - x \rightarrow y = \dots$

2.  $S_{x=5} : y = 2\sqrt{x+1} \rightarrow y = \dots$

3.  $f(x) = 2x^2 - x$ , bereken netjes  $f'(2) = \left(\frac{df}{dx}\right)_{x=2} = \lim_{\Delta x \rightarrow 0} \frac{f(2+\Delta x) - f(2)}{\Delta x} = \dots$

**Algebra oefeningen:**

4.  $(x+2)^3 =$

5.  $(x-1)^4 =$

6.  $(2x-1)^3 =$

7.  $(1-x)^4 =$

**Gebruik regels differentiëren:**

8.  $f(x) = \sqrt{x}$      $f(x) = \frac{1}{x}$      $f(x) = \frac{2}{\sqrt{x}}$      $f(x) = \frac{3}{2x}$      $f(x) = \frac{x^2-1}{x}$

9.  $f(x) = \frac{x-3}{\sqrt{x}}$      $f(x) = \frac{2}{3x\sqrt{x}}$      $f(x) = \frac{3x^2}{2\sqrt{x}}$      $f(x) = \frac{5x-2}{3\sqrt{x}}$

10.  $f(x) = (3x-1)^2$      $f(x) = (2x+1)^3$      $f(x) = (1-2x)^3$

**Staartdelingen:**

$5 \ / \ 62 \ \backslash \ 10 + 2$	dus	$\frac{62}{5} = 12 \frac{2}{5}$	$11 \ / \ 123 \ \backslash \ 11$	dus	$\frac{123}{11} = 11 \frac{2}{11}$
50			11		
12			13		
10			11		
2			2		

**Oefenen:**

$\frac{5x-1}{x+1} =$        $\frac{2x+3}{x-1} =$        $\frac{6x-7}{2x+1} =$        $\frac{x^2-6x+8}{x-2} =$

$\frac{x^2+3x-10}{x+5} =$        $\frac{x^3-8}{x-2} =$        $\frac{x^3-1}{x-1} =$        $\frac{x^2-12x+48}{x-4} =$

$\frac{5+4x}{x-1} =$        $\frac{x^2-1}{x-1} =$        $\frac{x^3-8}{x-2} =$        $\frac{2x^2-10x+12}{x-2} =$

**Vergelijking oplossen:**

$$x^2 - 4x - 12 = 0$$

ontbinden  
Kwadraatplitsen  
Abc-formule

**Alle 3 methoden gebruiken:**

$$\begin{array}{ll} x^2 + 2x - 24 = 0 & x^2 - 6x + 7 = 0 \\ x^2 - 6x + 8 = 0 & x^2 + 4x + 3 = 0 \end{array}$$

**Kies de handigste**

$$\begin{array}{ll} 2x^2 - x - 6 = 0 & x^2 + x - 56 = 0 \\ x^2 + 6x - 16 = 0 & 2x^2 - 3x - 4 = 0 \end{array}$$

**Alles door elkaar:**

1.  $S_{x=-3} : y = 3\sqrt{x+2} \rightarrow y = \dots$

2.  $S_{y=x} : y = \frac{2x+3}{x-1} \rightarrow y = \dots$

3.  $(6-x)^3 =$

4.  $(x-2)^5 =$

5.  $f(x) = \frac{2x-1}{3\sqrt{x}} \Rightarrow f'(x) =$

6.  $f(x) = \frac{5+\sqrt{x}}{3x} \Rightarrow f'(x) =$

7.  $\frac{5x+4}{2-x} =$

8.  $\frac{3x+2}{x-2} =$

9.  $x^2 + 8x + 15 = 0$

10.  $x^2 + 6x + 7 = 0$