

Balansmethode

Opgave 1: (Eerstegraads)

Los op.

a. $\frac{3-x}{4} = 2$

c. $\frac{1}{4}x - 2 = \frac{1}{2}$

e. $\frac{x-8}{x+1} = 4$

g. $\frac{x}{x-1} = \frac{2}{5}$

i. $\frac{x+3}{4} = \frac{2}{3}$

k. $-\frac{2}{x} - 7 = 10$

b. $6 = \frac{x-4}{3}$

d. $\frac{1}{3} - x = \frac{1}{6}$

f. $\frac{5}{x} = 7$

h. $\frac{x}{8} = \frac{x-1}{3}$

j. $\frac{2}{7} = \frac{1}{14x-7}$

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

Opgave 2: (Machts- & wortelvergelijkingen)

Los op.

a. $x^2 - 4 = 12$

c. $2(x-2)^2 - 4 = 14$

e. $x^4 = 256$

g. $\frac{1}{4}x^3 - 2 = 14$

i. $3\sqrt{x-2} + 4 = 19$

k. $(x-3)^5 = 32$

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

o. $3\sqrt{x} - 2 = 4$

q. $\frac{2x+7}{3} - 2 = 7$

s. $\frac{2(x-3)^2-6}{6} - 2 = 0$

b. $6 - 2x^2 = -2$

d. $5 - 3(2-x)^2 = 2$

f. $125 = x^3$

h. $\frac{1}{7}x^3 - 48 = 1$

j. $8 - 4\sqrt{2x-2} = 0$

l. $(2-2x)^3 = 64$

n. $2 - 4(1-x)^2 = -14$

p. $4 - 6\sqrt{x} = 28$

r. $\frac{3x-5}{4} - 13 = -12$

t. $\left(\frac{3}{x} - 4\right)^2 - 3 = 97$

Opgave 3: Moeilijk (VWO Wiskunde B)

Los op.

a. $4 - 3\sqrt{x} = 2\sqrt{x}$

b. $\sqrt{4x} + 4 = 2\sqrt{4x}$

c. $(4x - 1)^2 = (3x - 2)^2$

d. $4x^2 = (3x - 5)^2$

e. $4(x - 3) = 2x(x - 3)$

f. $3x(x - 2) = 9(x - 2)$

g. $\frac{4}{3-x} = 3 - x$

h. $x + 2 = \frac{9}{x+2}$

i. $\sqrt[4]{9x-2} = 3$

j. $4\sqrt[6]{x^3} - 3 = 5$

k. $\frac{2x-3}{x^2+1} = \frac{x-1}{x^2+1}$

l. $\frac{6x}{3-x} = \frac{4x+18}{3-x}$

m. $\frac{5x^2-15}{x^3-7x-2} = 0$

n. $\frac{72-2x^2}{3-x^2-x^5} + 2 = 2$

Opgave 5: (Lineair, kwadraat & wortel)

Druk x uit in y

a. $y = 3x - 6$

b. $y = 16 - 2x$

c. $6x - 4y = 18$

d. $2y - x = 7$

e. $2(5x - 20) - 5y = 10$

f. $6x - 2(y - 3) = 9$

g. $y = \frac{1}{4}x - 7$

h. $y = \frac{1}{8}x - \frac{3}{4}$

i. $2(x - 7) - y = 3x + 2$

j. $4(2 - y) + 4x = 3y$

k. $y = \frac{1}{3}\sqrt{x}$

l. $y = \frac{1}{6}\sqrt{x-2}$

m. $y = x^2 - 4$

n. $y = 3 - x^2$

o. $y = (x - 3)^2 - 4$

p. $y = 5 - \frac{x^2}{3}$

Opgave 6: (Machten & machtswortels, breuken, meerdere keren variabele)

Druk x uit in y

a. $y = 3\sqrt{x} - 2$

b. $y = \frac{\sqrt{x}+3}{2}$

c. $\sqrt[4]{x} - 4 = y + 3$

d. $6 - \sqrt[3]{x} - y = 0$

e. $2x^2 - y^2 = 4x^2 - 8$

f. $3y^2 - x^2 = y^2 + 3$

g. $27x^2 \cdot y = 9$

i. $y = \sqrt[3]{\frac{x-3}{4}}$

k. $y = \frac{4}{x-3}$

m. $y = \sqrt{\frac{5}{x}} - 2$

h. $xy^2 - 4 = 16$

j. $y = \sqrt[4]{\frac{4-x}{5}}$

l. $y = \frac{5}{2-x}$

n. $y = 2\sqrt{\frac{4}{x}}$