

$$x^2 + 4x - 21 = \underline{(x-3)(x+7)}$$

$$x^2 + 4x - 32 = \underline{(x-4)(x+8)}$$

$$x^2 + 4x + 3 = \underline{(x+1)(x+3)}$$

$$x^2 - 4x - 5 = \underline{(x-5)(x+1)}$$

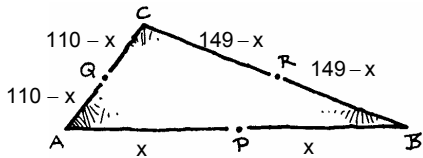
$$x^2 - 4x - 12 = \underline{(x-6)(x+2)}$$

$$x^2 - 4x - 140 = \underline{(x-14)(x+10)}$$

$$x^2 - 25x + 24 = \underline{(x-24)(x-1)}$$

$$x^2 + 24x - 25 = \underline{(x-1)(x+25)}$$

$$x^2 - 25 = \underline{(x-5)(x+5)}$$



$$110 - x$$

$$149 - x$$

$$CQ + CR = 93$$

$$(110 - x) + (149 - x) = 93$$

$$259 - 2x = 93$$

$$-2x = -166$$

$$x = 83$$

$$AB = 166 \text{ cm}; BC = 132 \text{ cm}; CA = 54 \text{ cm}$$

$\triangle AMB$ is gelijkbenig, want $MA = MB$.

Dus $\angle MAB = \angle B = 38^\circ$.

$\triangle AMC$ is ook gelijkbenig, want $MA = MC$.

Dus $\angle MAC = \angle C = 12^\circ$.

$$\angle BAC = \angle MAB + \angle MAC = 38 + 12 = 50^\circ$$

$$\angle BMA = 180^\circ - (38^\circ + 38^\circ) = 104^\circ$$

$$\angle CMA = 180^\circ - (12^\circ + 12^\circ) = 156^\circ$$

$$\angle BMC = 360^\circ - (104^\circ + 156^\circ) = 100^\circ$$

$$\angle BAC = (b + c)^\circ$$

$$\angle BMA = (180 - 2b)^\circ$$

$$\angle CMA = (180 - 2c)^\circ$$

$$\angle BMC = 360 - ((180 - 2b) + (180 - 2c))$$

$$= 360 - (360 - 2b - 2c)$$

$$= 360 + (-360 + 2b + 2c)$$

$$= (2b + 2c)^\circ = (2(b+c))^\circ$$

Dus $\angle BMC$ is twee keer zo groot als $\angle BAC$.

$$6 \cdot (2x)^2 = \underline{24x^2}$$

$$6 - (2x)^2 = \underline{6 - 4x^2}$$

$$(6 - 2x)^2 = \underline{36 - 24x + 4x^2}$$

$$-(6 - 2x)^2 = \underline{-36 + 24x - 4x^2}$$

$$(6 - 2x)2x = \underline{12x - 4x^2}$$

$$-6 \cdot (-2x)^2 - 6 \cdot (-2x)^2 = \underline{-12x^2}$$

$$6 \cdot (2x)^2 - (6 - 2x)^2 = \underline{20x^2 + 24x - 36}$$

$$-(6 - 2x - (2x - 2)) = \underline{4x - 8}$$

16 Met en zonder haakjes

$$2 \cdot (3 + 5)^2 = 2 \cdot 8^2 = 2 \cdot 64 = 128$$

$$2 \cdot 3 + 5^2 = 6 + 25 = 31$$

$$2 \cdot (3 + 5^2) = 2 \cdot (3 + 25) = 2 \cdot 28 = 56$$

$$(2 \cdot (3 + 5))^2 = (2 \cdot 8)^2 = 16^2 = 256$$

$$2 - 3 \cdot 5 + 7 = 2 - 15 + 7 = -6$$

$$2 - 3 \cdot (5 + 7) = 2 - 3 \cdot 12 = 2 - 36 = -34$$

$$(2 - 3) \cdot 5 + 7 = -1 \cdot 5 + 7 = -5 + 7 = 2$$

$$(2 - 3) \cdot (5 + 7) = -1 \cdot 12 = -12$$

$$2 - (3 \cdot 5 + 7) = 2 - (15 + 7) = 2 - 22 = -20$$

$$1 = 2 + 3 - 4 \quad 6 = 3 \cdot (4 - 2)$$

$$2 = 2 \cdot (4 - 3) \quad 7 = 3^2 - \sqrt{4}$$

$$3 = 2 + 4 - 3 \quad 8 = (4 - 2)^3$$

$$4 = 4 \cdot (3 - 2) \quad 9 = 4 + 3 + 2$$

$$5 = 4 + 3 - 2 \quad 10 = 3 \cdot 2 + 4$$

Dit zijn maar voorbeelden. Het kan natuurlijk ook anders.

$$\text{Ja. Bijvoorbeeld } 2 \cdot 4^3 = 2 \cdot 64 = 128$$

$$\begin{array}{|c|} \hline 3 \cdot 5 \\ \hline 15 \\ \hline 15 \\ \hline \end{array} + \begin{array}{|c|} \hline 20 : (2 - 6) \\ \hline 20 : -4 \\ \hline -5 \\ \hline \end{array} - \begin{array}{|c|} \hline 3 \cdot (7 - 4) \\ \hline 3 \cdot 3 \\ \hline 9 \\ \hline \end{array} - \begin{array}{|c|} \hline (6 + (3 - 7)) \\ \hline (6 + -4) \\ \hline 2 \\ \hline \end{array} =$$

$$\begin{array}{|c|} \hline 3 \cdot (4 + 5) \\ \hline 27 + 9 = 36 \\ \hline \end{array} + \begin{array}{|c|} \hline (6 - 9)^2 \\ \hline (-3)^2 = 9 \\ \hline \end{array} = 3 \cdot 9 + (-3)^2 = 27 + 9 = 36$$

$$\begin{array}{|c|} \hline (1 + 2 \cdot 3^4 - 5 \cdot 6) : 7 = (1 + 2 \cdot 81 - 30) : 7 = \\ \hline (1 + 162 - 30) : 7 = 133 : 7 = 19 \\ \hline \end{array}$$

$$3(x + 5) = \underline{3x + 15}$$

$$3(x + 5) + 5(x - 3) = \underline{3x + 15 + 5x - 15 = 8x}$$

$$3(x + 5) - 3(x + 5) = \underline{0}$$

$$(5x)^2 = \underline{25x^2}$$

$$3 \cdot (5x)^2 = \underline{3 \cdot 25x^2 = 75x^2}$$

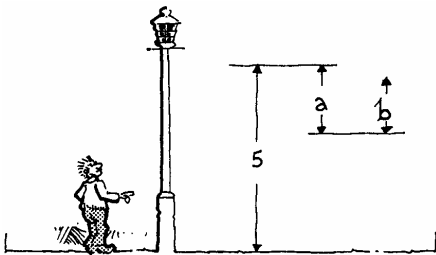
$$(3 \cdot 5x)^2 = \underline{(15x)^2 = 225x^2}$$

$$\frac{1}{2} \left(\frac{2}{3}x - \frac{3}{4} \right) = \underline{\frac{1}{3}x - \frac{3}{8}}$$

$$-\frac{1}{2} \left(\frac{2}{3}x - \frac{3}{4} \right) = \underline{-\frac{1}{3}x + \frac{3}{8}}$$

$$-\frac{1}{2} \left(-\frac{2}{3}x - \frac{3}{4} \right) = \underline{\frac{1}{3}x + \frac{3}{8}}$$

$p - q - r$ hoort bij manier 1
 $p - (q - r)$ hoort bij manier 2



$$a - b$$

$$5 - (a - b)$$

$$5 - a + b$$

$$5 - (a - b) = 5 - a + b$$

$$54 - x$$

$$x - y$$

$$54 - (x - y)$$

$$54 - x + y$$

$$54 - (x - y) = 54 - x + y$$

$$8500 - 1007 = 7500 - 7 = 7493$$

$$8500 - 1003 = 7500 - 3 = 7497$$

$$8500 - 1010 = 7500 - 10 = 7490$$

$$8500 - (1000 + x) = 7500 - x$$

$$8500 - 999 = 7500 + 1 = 7501$$

$$8500 - 997 = 7500 + 3 = 7503$$

$$8500 - 990 = 7500 + 10 = 7510$$

$$8500 - (1000 - x) = 7500 + x$$

$$8500 - (1000 - x) = 8500 - (1000 - 3) =$$

$$8500 - 1003 = 7497$$

$$7500 + x = 7500 + 3 = 7497$$

Klopt.

$$3a + (a + 2) = 4a + 2$$

$$-3a - (a - 2) = -4a + 2$$

$$3a + (-a + 2) = 2a + 2$$

$$-3a + (-a - 2) = -4a - 2$$

$$20 - (x + 1) = 19 - x$$

$$2x - (x - 1) = x + 1$$

$$2x - (3x - 5) = -x + 5$$

$$3x - (3x - 5) = 5$$

1^e vaas: aantal rozen: x
 aantal freesia's: $12 - x$
 2^e vaas: aantal rozen: $15 - x$
 aantal freesia's: $12 - (15 - x) = x - 3$

$x - 3$ is inderdaad 3 minder dan x .
 $12 - x$ is inderdaad 3 minder dan $15 - x$

$$7x + 5 - (3 + 2x) = 5x + 2$$

$$5x + 3 - (7 - 3x) = 8x - 4$$

$$-3(x + 5) + 2(x + 2) = -x - 11$$

$$-(x + 2) - (3 - x) - (7 + x) = -x - 12$$

$$(2x - 3)(x + 1) = 2x^2 - x - 3$$

$$(2x - 3)^2 = 4x^2 - 12x + 9$$

$$-(x + 1)^2 = -x^2 - 2x - 1$$

$$(2x - 3)^2 - (x + 1)^2 = 3x^2 - 14x + 8$$

oplossing: $x = -2$

controle: $x - (1 - x) + 8 = -2 - 3 + 8 = 3$
 $3(3 + x) = 3 \cdot 1 = 3$

oplossing: $x = \frac{5}{3}$

controle: $(x + 3)(x - 3) = \frac{14}{3} \cdot -\frac{4}{3} = -\frac{56}{9}$
 $(x + 1)(x - 4) = \frac{8}{3} \cdot -\frac{7}{3} = -\frac{56}{9}$

oplossing: $x = \frac{1}{3}$

controle: $x - \frac{1}{2}(3x + 4) = \frac{1}{3} - \frac{1}{2} \cdot 5 =$

$$\frac{2}{6} - \frac{15}{6} = -\frac{13}{6}$$

$$-(2\frac{1}{2} - x) = -(2\frac{1}{2} - \frac{1}{3}) = -(\frac{15}{6} - \frac{2}{6}) = -\frac{13}{6}$$

$$\begin{array}{c} | & & | \\ -x+1 & & 2x-3 \end{array}$$

$$(2x - 3) - (-x + 1) = 3x - 4$$

$$\begin{array}{c} | & & | & & | \\ -x+1 & & 3x-8,5 & & 2x-3 \end{array}$$

$$3x - 8,5 = 0,5(-x + 1) + (2x - 3)$$

$$3x - 8,5 = 0,5(x - 2)$$

$$3x - 8,5 = 0,5x - 1$$

$$6x - 17 = x - 2$$

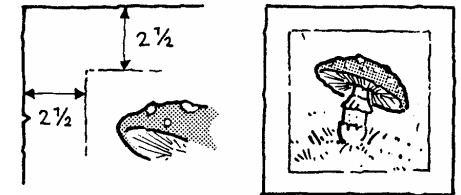
$$5x - 17 = -2$$

$$5x = 15$$

$$x = 3$$

controle: $-x + 1 = -2$ en $2x - 3 = 3$.

$3x - 8,5 = 0,5$; en $0,5$ ligt midden tussen -2 en 3 .



$$\frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4} \text{ m}^2$$

$$(x + 5)^2 - x^2$$

$$(x + 5)^2 - x^2 = 800 \cdot \frac{1}{4}$$

$$x^2 + 10x + 25 - x^2 = 200$$

$$10x + 25 = 200$$

$$10x = 175$$

$$x = 17,5$$

17,5 bij 17,5 meter

$$5 \cdot (-4x)^2 = 5 \cdot 16x^2 = 80x^2$$

$$5 - (4x)^2 = 5 - 16x^2$$

$$(5 - 4x)^2 = 25 - 40x + 16x^2$$

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

$$(x + 1)^2 - (x^2 + 1) = 1$$

$$x^2 + 2x + 1 - (x^2 + 1) = 1$$

$$2x = 1$$

$$x = \frac{1}{2}$$

$$\text{controle: } (x + 1)^2 - (x^2 + 1) =$$

$$\left(\frac{3}{2}\right)^2 - \left(\frac{1}{4} + 1\right) = \frac{9}{4} - \frac{5}{4} = 1$$

$$-(2x - y - 2(x - y)) = -(2x - y - (2x - 2y)) =$$

$$-(2x - y + (-2x + 2y)) = -(y) = -y$$

$$-(2x - y) - 2(x - y) = (-2x + y) - (2x - 2y) =$$

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

$$-2x - (y - (2x - y)) = -2x - (y + (-2x + y)) =$$

$$-2x - (-2x + 2y) = -2x + (2x - 2y) = -2y$$

$$-(2x - (y - (2x - y))) = -(2x - (y + (-2x + y))) =$$

$$= -(2x - (-2x + 2y)) = -(2x + (2x - 2y)) =$$

$$-(4x - 2y) = -4x + 2y$$

$$x^2 + 10x + 24 = (x + 4)(x + 6)$$

$$x^2 - 10x - 24 = (x - 12)(x + 2)$$

$$x^2 + 10x - 24 = (x - 2)(x + 12)$$

$$x^2 - 10x + 24 = (x - 6)(x - 4)$$

$$(2x - 5)^2 = 4x^2 - 20x + 25$$

$$-(2x - 5)^2 = -4x^2 - 20x - 25$$

$$2(x - 5)^2 = 2(x^2 - 10x + 25) = 2x^2 - 20x + 50$$

$$(2(x - 5))^2 = (2x - 10)^2 = 4x^2 - 40x + 100$$

HEKKENPROBLEEM

appel en een kiwi wegen samen 340 g,
kiwi en een peer wegen samen 300 g
en appel en een peer wegen samen
7. Wat weegt elk van de vruchten?
Hoeveelicht van de appel noemen we x .

Hoeveelicht kiwi:

Hoeveelicht peer:

vergelijking opstellen: _____

waarde $x =$ _____

hoeveelicht: appel: _____

kiwi: _____

peer: _____

DUJCTEN VAN TWEETERMEN

MULES OPSTELLEN

hoeveel cm^2 is de oppervlakte van B groter
dan van A (uitgedrukt in x)? Schrijf
het antwoord zonder haakjes:

hoeveel oppervlakte van B is $60 cm^2$ groter dan
dan A.
geef de afmetingen van A en B.

$$\frac{1}{2}(x-7) = 2x - \left(\frac{1}{4}x + 1\right)$$

} haakjes
weg

$$\frac{1}{2}x - 3\frac{1}{2} = 2x - \frac{1}{4}x - 1$$

} maal 4

$$2x - 14 = 8x - x - 4$$

} vereen-
voudigen

$$2x - 14 = 7x - 4$$

} min $2x$

$$-14 = 5x - 4$$

} plus 4

$$-10 = 5x$$

} delen
door 5

$$-2 = x$$

controle:

$$\frac{1}{2}(x-7) = \frac{1}{2} \cdot -9 = -4\frac{1}{2}$$

$$2x - \left(\frac{1}{4}x + 1\right) = -4 - \left(-\frac{1}{2} + 1\right)$$

$$= -4 - \frac{1}{2} = -4\frac{1}{2}$$

$$3(x - 5) = 2(x - 7)$$

} haakjes weg

$$3x - 15 = 2x - 14$$

} min $2x$

$$x - 15 = -14$$

} plus 15

$$x = 1$$

$$\text{controle: } 3(x - 5) = 3 \cdot -4 = -12$$

$$2(x - 7) = 2 \cdot -6 = -12$$

$$3x - 5 = 2x - (x - 1)$$

} haakjes weg

$$3x - 5 = x + 1$$

} min x

$$2x - 5 = 1$$

} plus 5

$$2x = 6$$

} delen door 2

$$x = 3$$

$$\text{controle: } 3x - 5 = 9 - 5 = 4$$

$$2x - (x - 1) = 6 - 2 = 4$$

$$\begin{aligned} 3 \cdot -4 - 2 \cdot (4 - 7) + (-36 : 9)^2 &= \\ -12 - 2 \cdot -3 + (-4)^2 &= \\ -12 - -6 + 16 &= \\ -12 + 6 + 16 &= 10 \end{aligned}$$

$$10 \cdot (100 - x) = 1000 - 10x$$

$$-5 \cdot (-50 + 2x) = 250 - 10x$$

$$\frac{1}{5} \cdot (-50 - 10x) = -10 - 2x$$

$$3 \cdot (-2x)^2 = 3 \cdot 4x^2 = 12x^2$$

$$-3 \cdot (2x)^2 = -3 \cdot 4x^2 = -12x^2$$

$$(-3 \cdot 2x)^2 = (-6x)^2 = 36x^2$$

$$500 - (100 - x) = 400 + x$$

$$500 - 5 \cdot (100 - x) = 500 - (500 - 5x) = 5x$$

$$100x - (100 - x) = 101x - 100$$

$1000 - (100 - 1)$, want daar trek je het
minste van de 1000 af

$$100 - (x + y) = 100 - x - y$$

$$100 - (x - y) = 100 - x + y$$

$$100 - (-x + y) = 100 + x - y$$

$$100 - (-x - y) = 100 + x + y$$

$$3x - (x - 2) = 3 \cdot (6 - 2x)$$

} haakjes weg

$$2x + 2 = 18 - 6x$$

} plus $6x$

$$8x + 2 = 18$$

} min 2

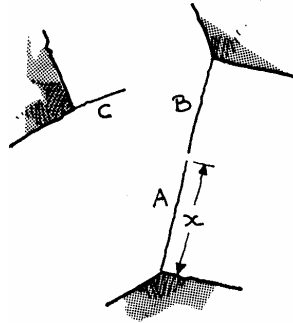
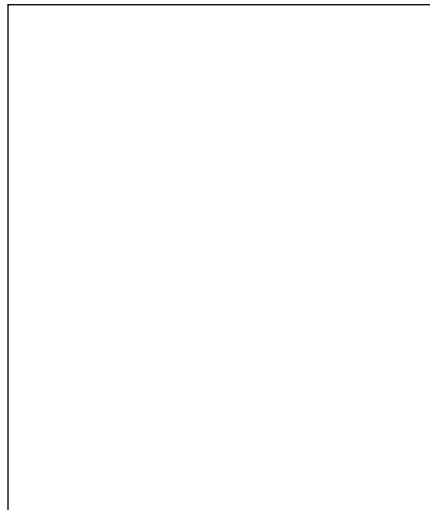
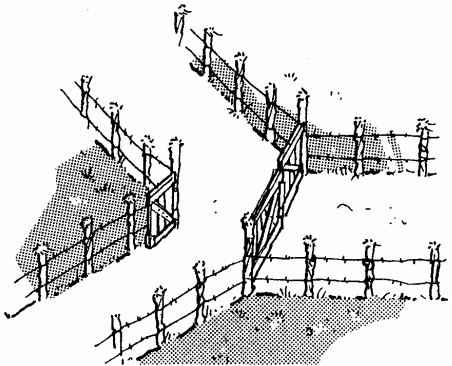
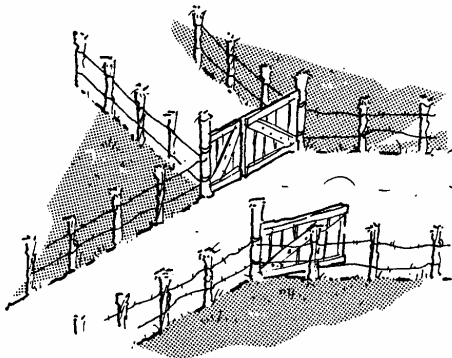
$$8x = 16$$

} delen door 8

$$x = 2$$

$$\text{controle: } 3x - (x - 2) = 6 - 0 = 6$$

$$3 \cdot (6 - 2x) = 3 \cdot (6 - 4) = 3 \cdot 2 = 6$$



$$\text{Breedte } C = \underline{2,00} - (1,60 - x)$$

$$\text{zonder haakjes: } \underline{0,40 + x}$$

$$\begin{array}{l} \underline{x} + \underline{0,40 + x} = 2,40 \\ 2x + 0,40 = 2,40 \\ 2x = 2,00 \\ x = 1,00 \end{array} \left. \begin{array}{l} \text{vereenv.} \\ \text{min } 0,40 \\ \text{d.d. } 2 \end{array} \right\}$$

$$\text{A: } 1,00 \text{ m} \quad \text{B: } 0,60 \text{ m} \quad \text{C: } 1,40 \text{ m}$$

$$\begin{array}{l} \text{breedte van A: } x \\ \text{breedte van B: } 4,70 - x \\ \text{breedte van C: } 4,20 - (4,70 - x) = x - 0,50 \end{array}$$

$$\begin{array}{l} \text{vergelijking: } x + (x - 0,50) = 3,30 \\ 2x - 0,50 = 3,30 \\ 2x = 3,80 \\ x = 1,90 \end{array}$$

$$\begin{array}{l} \text{breedte A: } 1,90; \text{ breedte B: } 2,80; \\ \text{breedte C: } 1,40 \end{array}$$

$$(2x - 3)(5x + 1) = \underline{10x^2 + 2x - 15x - 3 =}$$

$$\underline{10x^2 - 13x - 3}$$

$$2x - 3 - (5x + 1) = \underline{2x - 3 + (-5x - 1) =}$$

$$\underline{-3x - 4}$$

$$2x - 3 - 5(x + 1) = \underline{2x - 3 - (5x + 5) =}$$

$$\underline{2x - 3 + (-5x - 5) = -3x - 8}$$

$$2x - 3(-5x + 1) = \underline{2x - (-15x + 3) =}$$

$$\underline{2x + (15x - 3) = 17x - 3}$$

$$(2x + 1)(2x + 1) = (5 - 2x)(5 - 2x)$$

$$4x^2 + 4x + 1 = 25 - 20x + 4x^2$$

$$4x + 1 = 25 - 20x$$

$$24x + 1 = 25$$

$$24x = 24$$

$$x = 1$$

$$\text{controle: } (2x + 1)^2 = 3^2 = 9$$

$$(5 - 2x)^2 = 3^2 = 9$$

$$x^2 - 5x + 4 = 25 - 25 + 4 = 54$$

$$(x + 5)(x - 1) = 0 \cdot -6 = 0$$

De formule klopt niet.

$$x^2 + 4x - 5$$

$$\text{som} = -5 \text{ en product} = 4$$

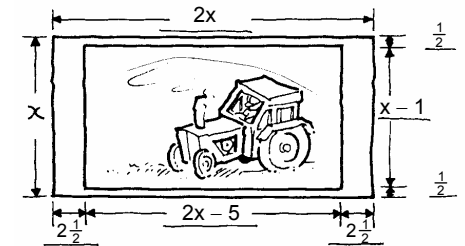
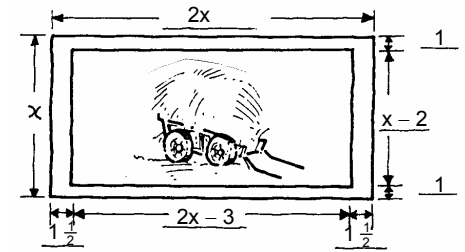
Ze heeft som en product verwisseld.

$$x^2 - 16x + 64 = (\underline{x - 8})(\underline{x - 8})$$

$$x^2 - 12x - 64 = (\underline{x - 16})(\underline{x + 4})$$

$$x^2 - 63x - 64 = (\underline{x - 64})(\underline{x + 1})$$

$$x^2 - 64 = (\underline{x - 8})(\underline{x + 8})$$



$$(2x - 3)(x - 2) = 2x^2 - 4x - 3x + 6 = 2x^2 - 7x + 6$$

$$(2x - 5)(x - 1) = 2x^2 - 2x - 5x + 5 = 2x^2 - 7x + 5$$

$$\text{Hoogakker} \quad | \quad 1 \text{ m}^2$$

$$x^2 + x - (x^2 - 1) = x^2 + x + (-x^2 + 1) = x + 1$$

$$(x - 1)^2 - (x^2 + 2x) = (x^2 - 2x + 1) + (-x^2 - 2x) = -4x + 1$$

$$x(x - 2) - x(x - 3) = x^2 - 2x - (x^2 - 3x) = x^2 - 2x + (-x^2 + 3x) = x$$

$$(x - 3)^2 - x(x + 4) = (x^2 - 6x + 9) - (x^2 + 4x) = x^2 - 6x + 9 + (-x^2 - 4x) = -10x + 9$$

$$(x + 3)(x - 2) = (x - 1)(x - 2)$$

$$x^2 + x - 6 = x^2 - 3x + 2$$

$$x - 6 = -3x + 2$$

$$4x - 6 = 2$$

$$4x = 8$$

$$x = 2$$

controle: $(x + 3)(x - 2) = 5 \cdot 0 = 0$
 $(x - 1)(x - 2) = 1 \cdot 0 = 0$

$$(x - 4)^2 = x(x + 4)$$

$$x^2 - 8x + 16 = x^2 + 4x$$

$$-8x + 16 = 4x$$

$$16 = 12x$$

$$x = \frac{16}{12} = \frac{4}{3}$$

controle: $(x - 4)^2 = (-\frac{8}{3})^2 = \frac{64}{9}$
 $x(x + 4) = \frac{4}{3} \cdot \frac{16}{3} = \frac{64}{9}$

$$(x - 3)^2 = (x + 3)^2$$

$$x^2 - 6x + 9 = x^2 + 6x + 9$$

$$-6x = 6x$$

$$0 = 12x$$

$$0 = x$$

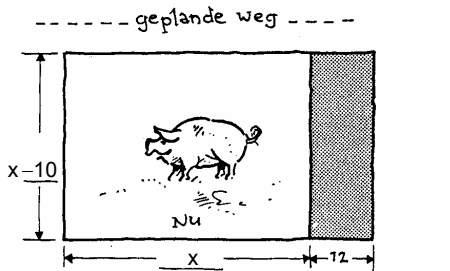
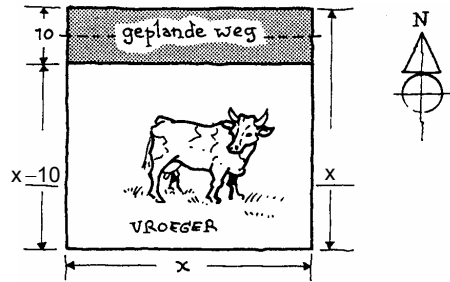
controle: $(x - 3)^2 = (-3)^2 = 9$
 $(x + 3)^2 = 3^2 = 9$

$$(x - 10)(x + 1) = x^2 - 9x - 10$$

$$(x - 3)(x - 27) = x^2 - 30x + 81$$

$$(x + 10)(x - 5) = x^2 + 5x - 50$$

$$(x + 9)(x - 2) = x^2 + 7x - 18$$



x^2	$(x - 10)(x + 12)$
-------	--------------------

$x^2 = (x - 10)(x + 12)$
 $x^2 = x^2 + 2x - 120$
 $0 = 2x - 120$
 $120 = 2x$
 $60 = x$
 De vierkante akker is 60 bij 60 meter.
 De rechthoekige akker is 50 bij 72 meter.
 De oppervlakte van beide akkers is 3600 m².

Corien	Joris
27	-27
27 - a	-27 + a
27 - a + b	-27 + a - b
22 - a + b	-22 + a - b

$(27 - a) + (-27 + a) = 0$; klopt.

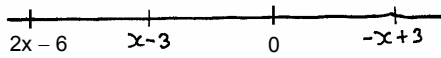
$$-(5a + 3b - c) = -5a - 3b + c$$

$$-(x^2 - 5x + 8) = -x^2 + 5x - 8$$

$$-(a + b) = a - b$$

$$-(-x - y) = -(-x + y) = x - y$$

tussen -7 en 2



$$(2x - y) - (-x - 2y) = (2x - y) + (x + 2y) = 3x + y$$

$$(2x - y) - (x + 2y) = (2x - y) + (-x - 2y) = x - 3y$$

$$(2x - y) - (x - 2y) = (2x - y) + (-x + 2y) = x + y$$

$$3 - (x - 4) = 3 + (-x + 4) = -x + 7$$

$$5 + x - (3x + 4) = 5 + x + (-3x - 4) = 1 - 2x$$

$$-2x + 5 - (-3x + 6) = -2x + 5 + (3x - 6) = x - 1$$

$$3x - 4 - (5 - 2x) = 3x - 4 + (-5 + 2x) = 5x - 9$$

$$2 - 3x - (2 - 3x) = 0$$

$$6 - (4x - 6) = 6 + (-4x + 6) = 12 - 4x$$

$$3(x - 3) + (4x - 7) - 2(3 - x) = (3x - 9) + (4x - 7) - (6 - 2x) = (3x - 9) + (4x - 7) + (-6 + 2x) = 9x - 22$$

$$8 - (-2x + 4) + (-2(x - 7)) = 8 - (-2x + 4) + (-2x + 14) = 8 + (2x - 4) + (-2x + 14) = 18$$

$$2x - 3(x - 2y) + (-2x - 2y) = 2x - (3x - 6y) + (-2x - 2y) = 2x + (-3x + 6y) + (-2x - 2y) = -3x + 4y$$

$$(2x - y) - (-x - 2y) - (-2x - 2y) = (2x - y) + (x + 2y) + (2x + 2y) = 5x + 3y$$

$$(x + 2) - 2(2x + 4) = 6$$

$$(x + 2) - (4x + 8) = 6$$

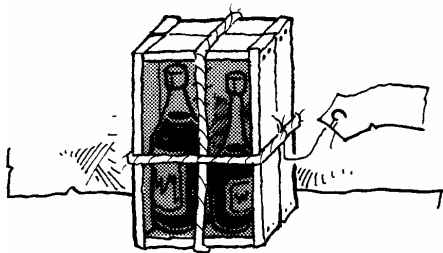
$$(x + 2) + (-4x - 8) = 6$$

$$-3x - 6 = 6$$

$$-3x = 12$$

$$x = -4$$

vereenvoudigen
 plus 6
 delen door -3
 controle: $(x + 2) - 2(2x + 4) = -2 - 2 \cdot 4 = -2 - 8 = -2 + 8 = 6$



prijs fles wijn = x
 prijs fles sherry = $12 - x$
 prijs fles cognac = $17 - (12 - x) = 5 + x$
 vergelijking: $x + (5 + x) = 20$
 oplossing: $2x + 5 = 20$
 $2x = 15$
 $x = 7,50$
 wijn: € 7,50; sherry: € 4,50; cognac: € 12,50

$$5 - (x - 1) = 5 + (-x + 1) = 6 - x$$

$$7 - (5 - (x - 1)) = 7 - (6 - x) =$$

$$7 + (-6 + x) = 1 + x$$

$$-(7 - (5 - (x - 1))) = -(1 + x) = -1 - x$$

$$3 - (6 + x) = 3 + (-6 - x) = -3 - x$$

$$x - (3 - (6 + x)) = x - (-3 - x) =$$

$$x + (3 + x) = 2x + 3$$

$$11 - (x - (3 - (6 + x))) = 11 - (2x + 3) =$$

$$11 + (-2x - 3) = 8 - 2x$$

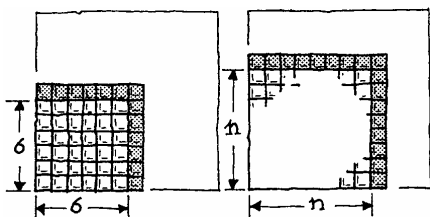
$$3x - (4 - 5x) = 3x + (-4 + 5x) = 8x - 4$$

$$2 - (3x - (4 - 5x)) = 2 - (8x - 4) =$$

$$2 + (-8x + 4) = 6 - 8x$$

$$-x - (2 - (3x - (4 - 5x))) = -x - (6 - 8x) =$$

$$-x + (-6 + 8x) = 7x - 6$$



13

31

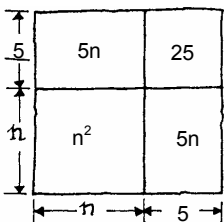
 $2n + 1$

$$\text{manier 1: } n^2 + (2n + 1) = n^2 + 2n + 1$$

$$\text{manier 2: } (n + 1)(n + 1) = (n + 1)^2$$

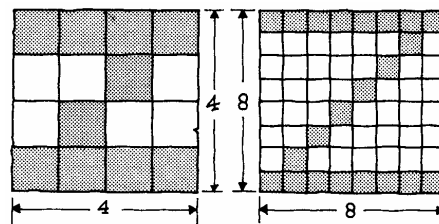
$$(n + 1)^2 = n^2 + 2n + 1$$

$$101^2 = (100 + 1)^2 = 100^2 + 2 \cdot 100 + 1 = 10201$$



n + 5 bij n + 5

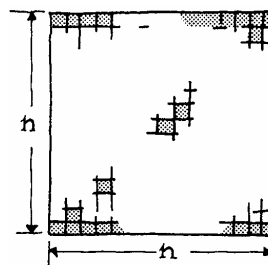
n + 9 bij n + 9 tegels



42

930

$$64^2 - (2 \cdot 64 + 62) = 62 \cdot 63 = 3906$$

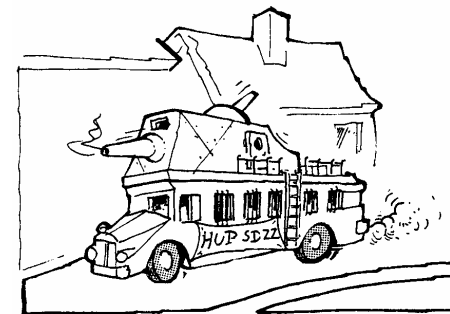


$$n^2 - (3n - 2) \quad | \quad (n - 2)(n - 1)$$

$$n^2 - (3n - 2) = (n - 2)(n - 1)$$

$$n^2 - (3n - 2) = n^2 - 3n + 2$$

$$(n - 2)(n - 1) = n^2 - 3n + 2$$



10 personen extra mee:
 korting per persoon = $10 \cdot 0,05 = 0,50$
 De bus kost $40 \cdot 5,50 = € 220$

$$6 - 5 \cdot 0,05 = € 5,75 \quad | \quad 6 - 17 \cdot 0,05 = € 5,15$$

$$35 \cdot 5,75 = € 201,25 \quad | \quad 47 \cdot 5,15 = € 242,05$$

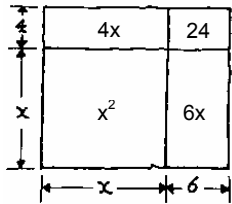
$$p = 6 - 0,05n$$

$$30 + n \quad | \quad 6 - 0,05n$$

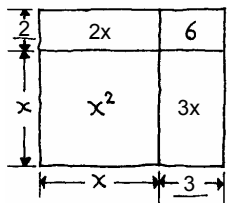
$$b = (30 + n)(6 - 0,05n)$$

$$b = 180 + 4,5n - 0,05n^2$$

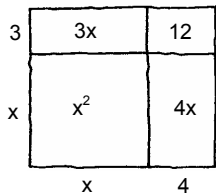
Dan $n = 20$.
 $b = 50 \cdot 5 = € 250$ of
 $b = 180 + 90 - 20 = € 250$



$10 = 4 + 6$	$24 = 4 \cdot 6$
--------------	------------------



$x^2 + 5x + 6 = (x + 2)(x + 3)$



$x^2 + 7x + 12 = (x + 3)(x + 4)$

$x^2 + 7x + 10 = (x + 2)(x + 5)$

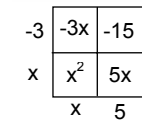
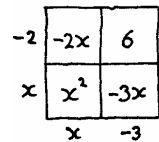
$x^2 + 9x + 8 = (x + 1)(x + 8)$

$x^2 + 9x + 14 = (x + 2)(x + 7)$

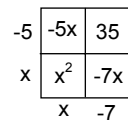
$x^2 + 9x + 18 = (x + 3)(x + 6)$

$x^2 + 9x + 20 = (x + 4)(x + 5)$

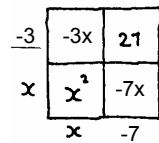
$(x + 4)(x + 6) = -1 \cdot 1 = -1$
 $x^2 + 10x + 24 = 25 + -50 + 24 = -1$



$(x - 3)(x + 5) = x^2 + 2x - 15$



$(x - 5)(x - 7) = x^2 - 12x + 35$



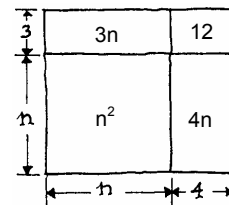
$x^2 - 10x + 21 = (x - 3)(x - 7)$

$x^2 + 7x - 18 = (x - 2)(x + 9)$

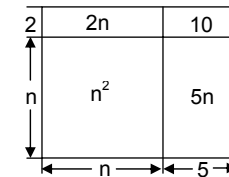
$x^2 + 7x + 10 = (x + 2)(x + 5)$

$x^2 - 7x - 8 = (x - 8)(x + 1)$

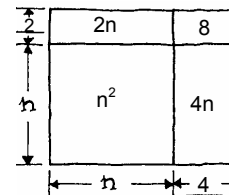
$x^2 - 7x + 12 = (x - 4)(x - 3)$



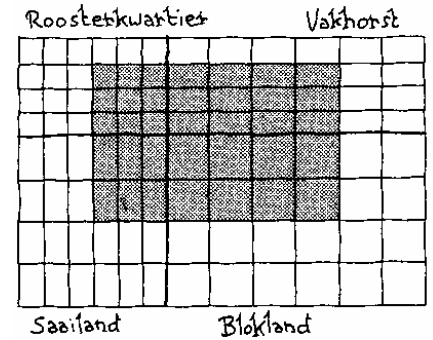
$(n + 3)(n + 4) = n^2 + 7n + 12$



$(n + 2)(n + 5) = n^2 + 7n + 10$



$(n + 2)(n + 4) = n^2 + 6n + 8$



a ²	ab	ab	b ²
----------------	----	----	----------------

1^o manier: lengte × breedte
 oppervlakte = $(3a + 4b)(3a + 2b)$

2^o manier: opp. Roosterkwartier + opp. Vakhorst + opp. Saailand + opp. Blokland
 oppervlakte = $9a^2 + 18ab + 8b^2$

$(3a + 4b)(3a + 2b) = 9a^2 + 18ab + 8b^2$

2ab	3b ²	b	
6a ²	9ab	3a	
2a	3b		

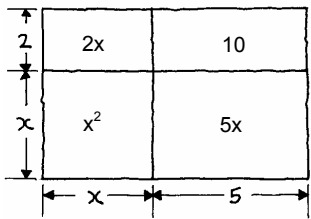
$(2a + 3b)(3a + b) = 6a^2 + 11ab + 3b^2$

3ab	2b ²	b	
3a ²	2ab	a	
3a	2b		

$(3a + 2b)(a + b) = 3a^2 + 5ab + 2b^2$

$(5a + 3b)(2a + 3b) = 10a^2 + 21ab + 9b^2$

$(2a + b)(5a + 2b) = 10a^2 + 9ab + 2b^2$

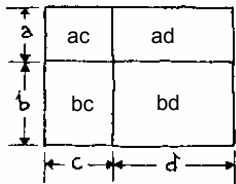


$$(x + 2)(x + 5) = x^2 + 7x + 10$$

$$(x + 3)(x + 7) = x^2 + 10x + 21$$

$$(x + 8)(x + 1) = x^2 + 9x + 8$$

$$(x + 6)(x + 6) = x^2 + 12x + 36$$



$$(a + b)(c + d) = ac + ad + bc + bd$$

$$(a + b)(c + d) = (-2 + 5)(-7 + 3) = 3 \cdot -4 = -12$$

$$ac + ad + bc + bd = -2 \cdot -7 + -2 \cdot 3 + 5 \cdot -7 + 5 \cdot 3 = 14 + -6 + -35 + 15 = -12$$

$$(2x + 5)(x + 3) = 2x^2 + 6x + 5x + 15 =$$

$$2x^2 + 11x + 15$$

$$(x + 5)(x + 2) = x^2 + 2x + 5x + 10 =$$

$$x^2 + 7x + 10$$

$$(x + 5)(3x + 1) = 3x^2 + x + 15x + 5 =$$

$$3x^2 + 14x + 5$$

$$(2x + 5)(2x + 5) = 4x^2 + 10x + 10x + 25 =$$

$$4x^2 + 20x + 25$$

$$26 \cdot 52 = (20 + 6) \cdot (50 + 2) =$$

$$20 \cdot 50 + 20 \cdot 2 + 6 \cdot 50 + 6 \cdot 2 =$$

$$1000 + 40 + 300 + 12 = 1352$$

$$73 \cdot 73 = (70 + 3) \cdot (70 + 3) =$$

$$70 \cdot 70 + 70 \cdot 3 + 3 \cdot 70 + 3 \cdot 3 =$$

$$4900 + 210 + 210 + 9 = 5329$$

$$50,4 \cdot 20,1 = (50 + 0,4) \cdot (20 + 0,1) =$$

$$50 \cdot 20 + 50 \cdot 0,1 + 0,4 \cdot 20 + 0,4 \cdot 0,1 =$$

$$1000 + 5 + 8 + 0,04 = 1013,04$$

$$(x + 3)(x + 2) = x^2 + 1$$

$$x^2 + 2x + 3x + 6 = x^2 + 1$$

$$x^2 + 5x + 6 = x^2 + 1$$

$$5x + 6 = 1$$

$$5x = -5$$

$$x = -1$$

controle:

$$(x + 3)(x + 2) = 2 \cdot 1 = 2$$

$$x^2 + 1 = 1 + 1 = 2$$

$$(x + 1)(x + 3) = x^2 + 3x$$

$$x^2 + 3x + x + 3 = x^2 + 3x$$

$$x^2 + 4x + 3 = x^2 + 3x$$

$$4x + 3 = 3x$$

$$x + 3 = 0$$

$$x = -3$$

controle: $(x + 1)(x + 3) = -2 \cdot 0 = 0$
 $x^2 + 3x = 9 + -9 = 0$

$$(x + 5)(x - 3) = (x + 5)(x - 3) =$$

$$x^2 + -3x + 5x + -15 = x^2 + 2x - 15$$

$$(x - 2)(x + 7) = (x - 2)(x + 7) =$$

$$x^2 + 7x + -2x + -14 = x^2 + 5x - 14$$

$$(x - 4)(x - 1) = (x - 4)(x - 1) =$$

$$x^2 + -x + -4x + 4 = x^2 - 5x + 4$$

$$(x - 2)^2 = (x - 2)(x - 2) = (x - 2)(x - 2) =$$

$$x^2 + -2x + -2x + 4 = x^2 - 4x + 4$$

$$(x - 4)(x + 4) = (x - 4)(x + 4) =$$

$$x^2 + -4x + 4x + -16 = x^2 - 16$$

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

$$x^2 + -5x + -5x + 25 = x^2 - 10x + 25$$

$$3 - 5(2 - x) = 5x - 7$$

$$(2x - 4) - (-2x + 6) = 4x - 10$$

$$-(2x - 3) - (x - 1) = -3x + 4$$

$$-(x - (4 - (2x - 7))) = -3x + 11$$

$$(x + 2)(2x + 4) = 2x^2 + 8x + 8$$

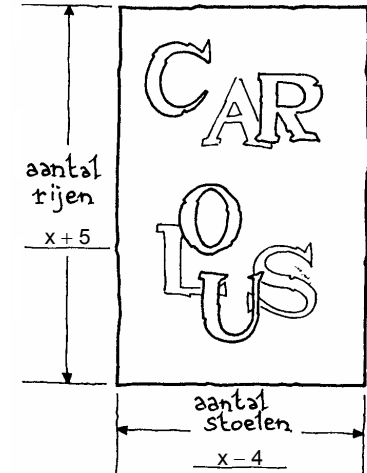
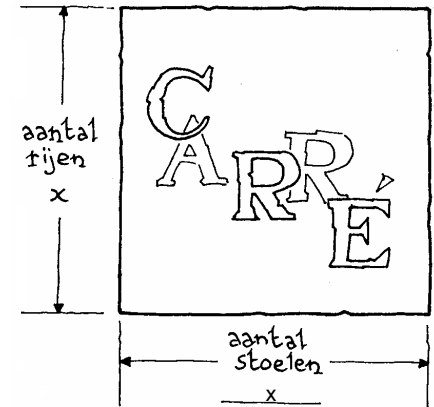
$$(x - 4)(x + 3) = x^2 - x - 12$$

$$-4 \cdot (-3x)^2 = -36x^2$$

$$-4 - (-3x)^2 = -4 - 9x^2$$

$$5 - 2(x - (3 - 2x)) = 11 - 6x$$

$$3(x - y) - (-2x + y) = 5x - 4y$$



$$x^2 \quad | \quad (x + 5)(x - 4)$$

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

$$x^2 = x^2 - 4x + 5x - 20$$

$$x^2 = x^2 + x - 20$$

$$0 = x - 20$$

$$20 = x$$

controle: $x^2 = 400$;

$$(x + 5)(x - 4) = 25 \cdot 16 = 400$$