Test je kennis t/m § 2.3

Theorie

$$3^2 \cdot 3^3 = 3^{2+3} = 3^5 \qquad 3^3 \cdot 2^3 = (3 \cdot 2)^3 = 6^3 \qquad \left(3^3\right)^2 = 3^{3 \cdot 2} = 3^6$$
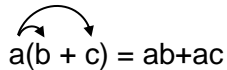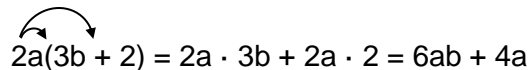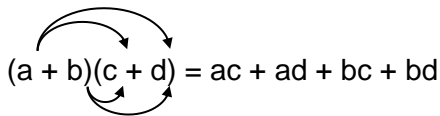
$$\frac{3^4}{3^2} = 3^{4-2} = 3^2 \qquad \frac{6^4}{3^4} = \left(\frac{6}{3}\right)^4 = 2^4 \qquad \left(-3^3\right)^2 = 3^{3 \cdot 2} = 3^6$$

$$\left(-3^3\right)^3 = -3^{3 \cdot 3} = -3^6$$

$a(b + c) = ab+ac$

$2a(3b + 2) = 2a \cdot 3b + 2a \cdot 2 = 6ab + 4a$

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

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1. Schrijf als één macht:

a. $9^7 \cdot 9^4 = 9^{7+4} = 9^{11}$

b. $\dfrac{5^5}{5^2} = 5^{5-2} = 5^3$

c. $4^3 \cdot 4^3 = 12^3$

d. $1{,}25^6 \cdot 8^6 = 10^6$

e. $\dfrac{69^5}{23^5} = \left(\dfrac{69}{23}\right)^5 = 3^5$

f. $\left(32^2\right)^6 = 32^{2 \cdot 6} = 32^{12}$

g. $\left(-5^2\right)^3 = -5^{2 \cdot 3} = -5^6$

h. $\left(\left(-5\right)^2\right)^3 = \left(-5\right)^{2 \cdot 3} = \left(-5\right)^6 = 5^6$

i. $27 = 3^3 \quad \left(3^3\right)^5 = 3^{15}$ dus $27^5 = 3^{15}$

j. $7^{18} = \left(7^6\right)^3$ (bijvoorbeeld)

2. Herleid:

a. $2a + 9b + 5a + 8b = 7a + 17b$

b. $2a \cdot 5b - 4a \cdot -9b = 10ab + 36ab = 46ab$

c. $x^7 \cdot y^7 \cdot x^4 \cdot y^7 = x^{11}y^{14}$

d. $-4x^3 \cdot (-5x^4) = 20x^7$

e. $\left(x^4 y\right)^3 = x^{12} y^3$

f. $\left(-3ab^2\right)^5 = -243a^5 b^{10}$ of $-3^5 a^5 b$ **Z.O.Z.**

3. Herleid:

a. $5a - 4(2a - 8) = -3a + 32$

b. $2(x + 6y) - 3(2x - 3y) = 2x + 12y - 6x + 9y = -4x + 21y$

c. $(a - 5)(b + 7) = ab + 7a - 5b - 35$

d. $(a - 3b)(a + b) - (a^2 - 15ab) = a^2 + ab - 3ab - 3b^2 - a^2 + 15\,ab =$

$13ab - 3b^2$