



# Drukbare assessering CAMI Wiskunde: Graad 9

## Faktorisasie

1. Faktoreiseer die volgende uitdrukkings.

1.1  $15d^6 + 9de$

1.2  $25b^8y^4 - f^2$

1.3  $4c^2 - 25e^8$

1.4  $b^2 - 11b + 28$

1.5  $a^2 - e^2$

1.6  $25d^2 - h^2$

1.7  $9b^6 - f^6$

1.8  $6d^8 + 4d^2f^6$

1.9  $25b^8y^4 - f^2$

1.10  $g^2 + g - 20$

1.11  $18m^{11} - 27m^5q$

2. Vereenvoudig die breuke m.b.v. faktorisasie.

2.1  $\frac{6m^2 - 48m}{6} \times \frac{8}{m-8}$

2.2  $\frac{m-5}{5m} \times \frac{5m^2 - 35m}{m^2 - 25}$

2.3  $\frac{4n^5p^7}{5n^6p} \times \frac{6n+6p}{n+p}$

2.4  $\frac{n^2 - 81}{5n - 25} \times \frac{5n}{3n + 27}$

2.5  $\frac{7g^2 + 14g}{7} \times \frac{1}{g+2}$



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### MEMO

Gemeenskaplike faktore: [4.5.1.1; 4.5.1.2; 4.5.1.3; 4.5.1.4; 4.5.1.5]

Verskil tussen vierkante: [4.5.3.1; 4.5.3.2; 4.5.3.3]

Kwadratiese drieterme: [4.5.4.1]

Faktorisasie van breuke: [4.8.2.2; 4.8.3.1; 4.8.3.2]

### 1. Faktoreer die volgende.

1.1  $15d^6 + 9de = 3d(5d^5 + 3e)$

1.2  $25b^8y^4 - f^2 = (5b^4y^2 + f)(5b^4y^2 - f)$

1.3  $4c^2 - 25e^8 = (2c + 5e^4)(2c - 5e^4)$

1.4  $b^2 - 11b + 28 = (b - 7)(b - 4)$

1.5  $a^2 - e^2 = (a + e)(a - e)$

1.6  $25d^2 - h^2 = (5d + h)(5d - h)$

1.7  $9b^6 - f^6 = (3b^3 + f^3)(3b^3 - f^3)$

1.8  $6d^8 + 4d^2f^6 = 2d^2(3d^6 + 2f^6)$

1.9  $25b^8y^4 - f^2 = (5b^4y^2 + f)(5b^4y^2 - f)$

1.10  $g^2 + g - 20 = (g + 5)(g - 4)$

1.11  $18m^{11} - 27m^5q = 9m^5(2m^6 - 3q)$

### 2. Vereenvoudig die volgende.

2.1  $\frac{6m^2 - 48m}{6} \times \frac{8}{m-8} = \frac{6m(m-8)}{6} \times \frac{8}{(m-8)} = 8m$

2.2  $\frac{m-5}{5m} \times \frac{5m^2 - 35m}{m^2 - 25} = \frac{(m-5)}{5m} \times \frac{5m(m-7)}{(m+5)(m-5)} = \frac{m-7}{m+5}$



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$$2.3 \quad \frac{4n^5 p^7}{5n^6 p} \times \frac{6n+6p}{n+p} = \frac{4n^5 p^7}{5n^6 p} \times \frac{6(n+p)}{(n+p)} = \frac{24p^6}{5n}$$

$$2.4 \quad \frac{n^2-81}{5n-25} \times \frac{5n}{3n+27} = \frac{(n+9)(n-9)}{5(n-5)} \times \frac{5n}{3(n+9)} = \frac{n(n-9)}{3(n-5)}$$

$$2.5 \quad \frac{7g^2+14g}{7} \times \frac{1}{g+2} = \frac{7g(g+2)}{7} \times \frac{1}{(g+2)} = g$$

