1 Matheumgebung

1) $a^2 + b^2 = c^2$

2) $(a + b) \cdot (a + b) = a^2 + b^2$

3) $\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \cdot \frac{c}{d}$

4) $f(x) = \ln(\frac{\frac{x}{2}}{\pi}) + \sin(x)$

5) $f_a(x) = e^{\frac{x^2}{x+2}+2x} + ax$

6) $g'(x) = 2x$

7) $\int_a^b f(x)dx$

8) $(\sum_{i=1}^{n} f_i(x))'$

9) $(a - b)(a + b) = a^2 - b^2$

2 pq-formel

$0 = x^2 + 10x + 16$
$\Rightarrow 0 = x^2 + px + q$
$\Rightarrow 0 = x^2 + px + (\frac{P}{2})^2 - (\frac{P}{2})^2 + q$
$\Rightarrow 0 = (x + \frac{p}{2})^2 - (\frac{P}{2})^2 + q$
$\Rightarrow (\frac{p}{2})^2 = (x + \frac{p}{2})^2 | \sqrt{...}$
$\Rightarrow \pm\sqrt{(\frac{p}{2})^2 - q} = x + \frac{p}{2} | - \frac{p}{2}$
$\Rightarrow x_1 = -\frac{p}{2} + \sqrt{(\frac{p}{2})^2 - q}$
$\Rightarrow x_2 = -\frac{p}{2} - \sqrt{(\frac{p}{2})^2 - q}$

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