

Unknown node type: matrix

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$$\begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ & \vdots & & \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{pmatrix} \begin{pmatrix} x_1 \\ x_2 \\ \vdots \\ x_n \end{pmatrix} = \begin{pmatrix} b_1 \\ b_2 \\ \vdots \\ b_n \end{pmatrix}$$

$$\mathrm{f}\left(x
ight)=\sum_{j=0}^{\infty}\;rac{\mathrm{f}^{\left(j
ight)}\left(heta
ight)}{j!}x^{j}$$

$$x^{2} - 9 = x^{2} - 3^{2}$$

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

$$x^2-9=x^2-igcap ^2$$



$$ax^2 + bx + c = 0$$

$$ax^2 + bx = -c$$

$$x^2 + \frac{b}{a}x = \frac{-c}{a}$$
 Divide out leading coefficient.

$$x^2+rac{b}{a}x+\left(rac{b}{2a}
ight)^2=rac{-c(4a)}{a(4a)}+rac{b^2}{4a^2}$$
 Complete the square.

$$\Big(x+rac{b}{2a}\Big)\Big(x+rac{b}{2a}\Big)=rac{b^2-4ac}{4a^2}$$
 Discriminant revealed.

$$\left(x+rac{b}{2a}
ight)^2=rac{b^2-4ac}{4a^2}$$

$$x+rac{b}{2a}=\sqrt{rac{b^2-4ac}{4a^2}}$$

$$x=rac{-b}{2a}\pm\{C\}\sqrt{rac{b^2-4ac}{4a^2}}$$
 There's the vertex formula. $x=rac{-b\pm\{C\}\sqrt{b^2-4ac}}{2a}$

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