Matrix calculator

Matrix calculator ✓
System of equations calculator
Determinant calculator
Eigenvalues calculator
Wikipedia:Matrices

Matrix A:

0.07502767	0.68756917	0.1125415	0.	0.07502767	0.1125415	0.	0.
0.	0.091639	0.66666667	0.07502767	0.	0.091639	0.07502767	0.
0.091639	0.	0.1374585	0.7290975	0.	0.	0.1374585	0.091639
0.03751383	0.03751383	0.	0.	0.53751383	0.1374585	0.1125415	0.
0.	0.0458195	0.0458195	0.	0.07502767	0.44587483	0.	0.07502767
0.	0.	0.03751383	0.03751383	0.091639	0.	0.47079183	0.091639
0.0458195	0.	0.	0.0458195	0.	0.1374585	0.1125415	0.5458195
0.	0.	0.	0.	0.08333333	0.07502767	0.091639	0.08333333

Cells + −

Determinant | Inverse | Transpose | Rank

Multiply by 2 | Row echelon form | Diagonal matrix | To the power of 2

LU decomposition | Cholesky decomposition

Matrix B:

3	6	7	5	3	5
6	2	9	1	2	7
0	9	3	6	0	6
2	6	1	8	7	9
2	0	2	3	7	5
9	2	2	8	7	9
3	6	1	2	9	3
1	9	4	7	8	4
5	0	3	6	1	0

← →

A × B

A + B

A − B

Cells + −

Determinant | Inverse | Transpose | Rank

Multiply by 2 | Row echelon form | Diagonal matrix | To the power of 2

LU decomposition | Cholesky decomposition

2A+3B =

Display decimals, number of fraction digits: 16 Clean +

Hide Ads

Insert in A

Insert in B

$$\begin{pmatrix} 0.75 & 0.1374585 & 0. & 0.1125415 & 0.1374585 & 0. & 0. & 0.1125415 & 0. \\ 0.07502767 & 0.68756917 & 0.1125415 & 0. & 0.07502767 & 0.1125415 & 0. & 0. & 0. \\ 0. & 0.091639 & 0.66666667 & 0.07502767 & 0. & 0.091639 & 0.07502767 & 0. & 0. \\ 0.091639 & 0. & 0.1374585 & 0.7290975 & 0. & 0. & 0.1374585 & 0.091639 & 0. \\ 0.03751383 & 0.03751383 & 0. & 0. & 0.53751383 & 0.1374585 & 0.1125415 & 0. & 0.25 \\ 0. & 0.0458195 & 0.0458195 & 0. & 0.07502767 & 0.44587483 & 0. & 0.07502767 & 0.15005533 \\ 0. & 0. & 0.03751383 & 0.03751383 & 0.091639 & 0. & 0.47079183 & 0.091639 & 0.183278 \\ 0.0458195 & 0. & 0. & 0.0458195 & 0. & 0.1374585 & 0.1125415 & 0.5458195 & 0.25 \\ 0. & 0. & 0. & 0. & 0.08333333 & 0.07502767 & 0.091639 & 0.08333333 & 0.16666667 \end{pmatrix}$$

$$\cdot \begin{pmatrix} 3 & 6 & 7 & 5 & 3 & 5 \\ 6 & 2 & 9 & 1 & 2 & 7 \\ 0 & 9 & 3 & 6 & 0 & 6 \\ 2 & 6 & 1 & 8 & 7 & 9 \\ 2 & 0 & 2 & 3 & 7 & 5 \\ 9 & 2 & 2 & 8 & 7 & 9 \\ 3 & 6 & 1 & 2 & 9 & 3 \\ 1 & 9 & 4 & 7 & 8 & 4 \\ 5 & 0 & 3 & 6 & 1 & 0 \end{pmatrix}$$

$$= \begin{pmatrix} 3.6872925 & 6.4630395 & 7.324751 & 5.9879565 & 5.175249 & 6.8625415 \\ 5.51342687 & 3.06326086 & 7.42607906 & 2.86337153 & 2.91320554 & 7.25138339 \\ 1.74972335 & 7.26688807 & 3.15808435 & 5.57502772 & 2.02519372 & 6.36655606 \\ 2.2371265 & 7.8110475 & 2.2869605 & 8.032116 & 7.348838 & 8.623755 \\ 4.23740313 & 1.25027664 & 2.81270744 & 4.66237547 & 6.17524896 & 4.71248611 \\ 5.26315013 & 2.07101319 & 2.34191567 & 5.53834382 & 4.48823319 & 5.283776 \\ 2.67871015 & 4.21220943 & 1.72051515 & 3.48283528 & 6.05758628 & 2.79983394 \\ 3.599668 & 6.4123755 & 3.6872925 & 7.241141 & 7.049834 & 4.399502 \\ 2.03349937 & 1.44988931 & 1.24169433 & 2.61683268 & 2.76661131 & 1.700166 \end{pmatrix}$$

Insert in A

Insert in B

$$\begin{pmatrix} 0.75 & 0.1374585 & 0. & 0.1125415 & 0.1374585 & 0. & 0. & 0.1125415 & 0. \\ 0.07502767 & 0.68756917 & 0.1125415 & 0. & 0.07502767 & 0.1125415 & 0. & 0. & 0. \\ 0. & 0.091639 & 0.66666667 & 0.07502767 & 0. & 0.091639 & 0.07502767 & 0. & 0. \\ 0.091639 & 0. & 0.1374585 & 0.7290975 & 0. & 0. & 0.1374585 & 0.091639 & 0. \\ 0.03751383 & 0.03751383 & 0. & 0. & 0.53751383 & 0.1374585 & 0.1125415 & 0. & 0.25 \\ 0. & 0.0458195 & 0.0458195 & 0. & 0.07502767 & 0.44587483 & 0. & 0.07502767 & 0.15005533 \\ 0. & 0. & 0.03751383 & 0.03751383 & 0.091639 & 0. & 0.47079183 & 0.091639 & 0.183278 \\ 0.0458195 & 0. & 0. & 0.0458195 & 0. & 0.1374585 & 0.1125415 & 0.5458195 & 0.25 \\ 0. & 0. & 0. & 0. & 0.08333333 & 0.07502767 & 0.091639 & 0.08333333 & 0.16666667 \end{pmatrix}$$

$$\cdot \begin{pmatrix} 3 & 6 & 7 \\ 5 & 3 & 5 \\ 6 & 2 & 9 \\ 1 & 2 & 7 \\ 0 & 9 & 3 \\ 6 & 0 & 6 \\ 2 & 6 & 1 \\ 8 & 7 & 9 \\ 2 & 0 & 2 \end{pmatrix}$$

$$= \begin{pmatrix} 3.950166 & 7.1623755 & 8.150332 \\ 5.01342686 & 3.41320556 & 5.87624505 \\ 5.23311203 & 2.2084717 & 7.60825039 \\ 2.8367945 & 3.74917 & 7.9444915 \\ 1.84994464 & 5.85049794 & 3.49999995 \\ 4.0795955 & 1.42954022 & 4.51716468 \\ 2.30384847 & 4.4410303 & 2.53723711 \\ 6.099668 & 4.8625415 & 6.991141 \\ 1.633444 & 1.88316728 & 1.87513832 \end{pmatrix}$$

Insert in A

Insert in B

$$\begin{pmatrix} 0.75 & 0.1374585 & 0. & 0.1125415 & 0.1374585 & 0. & 0. & 0.1125415 & 0. \\ 0.07502767 & 0.68756917 & 0.1125415 & 0. & 0.07502767 & 0.1125415 & 0. & 0. & 0. \\ 0. & 0.091639 & 0.66666667 & 0.07502767 & 0. & 0.091639 & 0.07502767 & 0. & 0. \\ 0.091639 & 0. & 0.1374585 & 0.7290975 & 0. & 0. & 0.1374585 & 0.091639 & 0. \\ 0.03751383 & 0.03751383 & 0. & 0. & 0.53751383 & 0.1374585 & 0.1125415 & 0. & 0.25 \\ 0. & 0.0458195 & 0.0458195 & 0. & 0.07502767 & 0.44587483 & 0. & 0.07502767 & 0.15005533 \\ 0. & 0. & 0.03751383 & 0.03751383 & 0.091639 & 0. & 0.47079183 & 0.091639 & 0.183278 \\ 0.0458195 & 0. & 0. & 0.0458195 & 0. & 0.1374585 & 0.1125415 & 0.5458195 & 0.25 \\ 0. & 0. & 0. & 0. & 0.08333333 & 0.07502767 & 0.091639 & 0.08333333 & 0.16666667 \end{pmatrix}$$

$$\cdot \begin{pmatrix} 3 & 6 \\ 7 & 5 \\ 3 & 5 \\ 6 & 2 \\ 9 & 1 \\ 2 & 7 \\ 0 & 9 \\ 3 & 6 \\ 0 & 6 \end{pmatrix}$$

$$= \begin{pmatrix} 5.4622095 & 6.225083 \\ 6.27602373 & 5.31353754 \\ 3.27491703 & 5.25830572 \\ 5.3367945 & 4.482282 \\ 5.48767977 & 4.42524896 \\ 2.2502767 & 5.00484448 \\ 1.43729247 & 6.24086428 \\ 2.324751 & 7.116556 \\ 1.1500553 & 2.93327802 \end{pmatrix}$$

Insert in A

Insert in B

$$\begin{pmatrix} 0.75 & 0.1374585 & 0. & 0.1125415 & 0.1374585 & 0. & 0. & 0.1125415 & 0. \\ 0.07502767 & 0.68756917 & 0.1125415 & 0. & 0.07502767 & 0.1125415 & 0. & 0. & 0. \\ 0. & 0.091639 & 0.66666667 & 0.07502767 & 0. & 0.091639 & 0.07502767 & 0. & 0. \\ 0.091639 & 0. & 0.1374585 & 0.7290975 & 0. & 0. & 0.1374585 & 0.091639 & 0. \\ 0.03751383 & 0.03751383 & 0. & 0. & 0.53751383 & 0.1374585 & 0.1125415 & 0. & 0.25 \\ 0. & 0.0458195 & 0.0458195 & 0. & 0.07502767 & 0.44587483 & 0. & 0.07502767 & 0.15005533 \\ 0. & 0. & 0.03751383 & 0.03751383 & 0.091639 & 0. & 0.47079183 & 0.091639 & 0.183278 \\ 0.0458195 & 0. & 0. & 0.0458195 & 0. & 0.1374585 & 0.1125415 & 0.5458195 & 0.25 \\ 0. & 0. & 0. & 0. & 0.08333333 & 0.07502767 & 0.091639 & 0.08333333 & 0.16666667 \end{pmatrix}$$

$$\cdot \begin{pmatrix} 3 & 1 \\ 6 & 2 \\ 7 & 7 \\ 5 & 0 \\ 3 & 9 \\ 5 & 3 \\ 6 & 6 \\ 2 & 0 \\ 9 & 6 \end{pmatrix}$$

$$= \begin{pmatrix} 4.274917 & 2.2620435 \\ 5.92607904 & 3.25083004 \\ 6.50000006 & 5.57502771 \\ 5.890643 & 1.8785995 \\ 5.56270746 & 7.53779046 \\ 4.55066397 & 3.325581 \\ 5.38261394 & 5.01176679 \\ 5.0707365 & 2.633444 \\ 2.84163903 & 2.524917 \end{pmatrix}$$

Insert in A

Insert in B

$$\begin{pmatrix} 0.75 & 0.1374585 & 0. & 0.1125415 & 0.1374585 & 0. & 0. & 0.1125415 & 0. \\ 0.07502767 & 0.68756917 & 0.1125415 & 0. & 0.07502767 & 0.1125415 & 0. & 0. & 0. \\ 0. & 0.091639 & 0.66666667 & 0.07502767 & 0. & 0.091639 & 0.07502767 & 0. & 0. \\ 0.091639 & 0. & 0.1374585 & 0.7290975 & 0. & 0. & 0.1374585 & 0.091639 & 0. \\ 0.03751383 & 0.03751383 & 0. & 0. & 0.53751383 & 0.1374585 & 0.1125415 & 0. & 0.25 \\ 0. & 0.0458195 & 0.0458195 & 0. & 0.07502767 & 0.44587483 & 0. & 0.07502767 & 0.15005533 \\ 0. & 0. & 0.03751383 & 0.03751383 & 0.091639 & 0. & 0.47079183 & 0.091639 & 0.183278 \\ 0.0458195 & 0. & 0. & 0.0458195 & 0. & 0.1374585 & 0.1125415 & 0.5458195 & 0.25 \\ 0. & 0. & 0. & 0. & 0.08333333 & 0.07502767 & 0.091639 & 0.08333333 & 0.16666667 \end{pmatrix} \cdot \begin{pmatrix} 3 \\ 6 \\ 7 \\ 5 \\ 3 \\ 5 \\ 6 \\ 2 \\ 9 \end{pmatrix}$$

$$= \begin{pmatrix} 4.274917 \\ 5.92607904 \\ 6.50000006 \\ 5.890643 \\ 5.56270746 \\ 4.55066397 \\ 5.38261394 \\ 5.0707365 \\ 2.84163903 \end{pmatrix}$$

Insert in A

Insert in B

$$\begin{pmatrix} 0.75 & 0.1374585 & 0. & 0.1125415 & 0.1374585 & 0. & 0. & 0.1125415 & 0. \\ 0.07502767 & 0.68756917 & 0.1125415 & 0. & 0.07502767 & 0.1125415 & 0. & 0. & 0. \\ 0. & 0.091639 & 0.66666667 & 0.07502767 & 0. & 0.091639 & 0.07502767 & 0. & 0. \\ 0.091639 & 0. & 0.1374585 & 0.7290975 & 0. & 0. & 0.1374585 & 0.091639 & 0. \\ 0.03751383 & 0.03751383 & 0. & 0. & 0.53751383 & 0.1374585 & 0.1125415 & 0. & 0.25 \\ 0. & 0.0458195 & 0.0458195 & 0. & 0.07502767 & 0.44587483 & 0. & 0.07502767 & 0.15005533 \\ 0. & 0. & 0.03751383 & 0.03751383 & 0.091639 & 0. & 0.47079183 & 0.091639 & 0.183278 \\ 0.0458195 & 0. & 0. & 0.0458195 & 0. & 0.1374585 & 0.1125415 & 0.5458195 & 0.25 \\ 0. & 0. & 0. & 0. & 0.08333333 & 0.07502767 & 0.091639 & 0.08333333 & 0.16666667 \end{pmatrix}$$

$$\cdot \begin{pmatrix} 3 \\ 6 \\ 7 \\ 5 \\ 3 \\ 5 \\ 6 \\ 2 \\ 9 \end{pmatrix}$$

$$= \begin{pmatrix} \frac{4274917}{1000000} \\ \frac{18518997}{3125000} \\ \frac{325000003}{50000000} \\ \frac{5890643}{1000000} \\ \frac{278135373}{50000000} \\ \frac{455066397}{100000000} \\ \frac{269130697}{50000000} \\ \frac{10141473}{2000000} \\ \frac{284163903}{100000000} \end{pmatrix}$$

With help of this calculator you can: find the matrix determinant, the rank, raise the matrix to a power, find the sum and the multiplication of matrices, calculate the inverse matrix. Just type matrix elements and click the button.

- Leave extra cells *empty* to enter non-square matrices.
- ► You can use decimal fractions or mathematical expressions:

  Use ↲ Enter, Space, ←, ↑, ↓, →, Backspace, and Delete to navigate between cells, Ctrl + C / Ctrl + V to copy/paste matrices.
- Drag-and-drop matrices from the results, or even from/to a text editor.
- To learn more about matrices use Wikipedia .

► Examples

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Support

► Thanks to: