

===== MATRIX CALCULATOR (Made by RC) =====

Restrictions

Maximum Matrix Order : 50

..... Matrix-In

ROWS: 10

COLS: 10

INPUT MODES

1 → READ from hardcoded data

Any → INPUT MANUALLY

RC> Choose Input Mode for [Matrix-In] (10×10) : 1

..... Matrix-In

```
1 3 4 2 23 12 12 2 12 12
3 5 -3.24 12 6 3 2 2 4 2
3 23 5 4 5 2 12 3 5 1
7 2 9 2 5 -5 2 -4 2 1
3 4 7 2 1 6 2 6 3 6
-3 2 6 2 8 3 9 3 6 -2
5 9 0 5 2 4 2 54 2 6
4 6 2 5 2 4 66 2 8 3
6 -1 4 6 3 7 -6 2 9 4
9 4 7 3 0 2 5 2 6 3
```

..... COMMANDS

Basic

info → Information Guide

input → Input Matrix

result → Last Result Matrix

continue → Continue Calculation (Set [Input] = [Result])

restore data → Restore Hardcoded Sample Data

Unitary Transforms

add scaler → Add Scaler

mult scaler → Multiply Scaler

det → Determinant

transpose → Transpose

minor → Minor Matrix

cofactor → Cofactor Matrix

adjoint → Adjoint Matrix

inverse → Inverse Matrix

pow → Power Matrix

Binary Transforms

add → Add Matrices (with scale)

mult → Multiply Matrices (with scale)

RC> ENTER COMMAND: input

..... Matrix-In

```
1 3 4 2 23 12 12 2 12 12
3 5 -3.24 12 6 3 2 2 4 2
3 23 5 4 5 2 12 3 5 1
7 2 9 2 5 -5 2 -4 2 1
3 4 7 2 1 6 2 6 3 6
-3 2 6 2 8 3 9 3 6 -2
5 9 0 5 2 4 2 54 2 6
4 6 2 5 2 4 66 2 8 3
```

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

RC> ENTER COMMAND: transpose

..... [Result] = TRANSPOSE([Matrix-In])

1 3 3 7 3 -3 5 4 6 9
3 5 23 2 4 2 9 6 -1 4
4 -3.24 5 9 7 6 0 2 4 7
2 12 4 2 2 2 5 5 6 3
23 6 5 5 1 8 2 2 3 0
12 3 2 -5 6 3 4 4 7 2
12 2 12 2 2 9 2 66 -6 5
2 2 3 -4 6 3 54 2 2 2
12 4 5 2 3 6 2 8 9 6
12 2 1 1 6 -2 6 3 4 3

RC> ENTER COMMAND: continue

RC> Input Matrix set to last Result Matrix

RC> ENTER COMMAND: inverse

..... [Result] = INVERSE([Matrix-In])

8.650635969283928D-02 -2.90880028523311D-03 -.023755301659088 -4.899894139319075D-02 .0711087235690573 .0896669507509767
4.170804274686705D-03 -3.098617612413268D-03 -.0791998179351764 -5.747662678031166D-02
.2305434482417454 -1.597320117955037D-02 -2.685164851962146D-03 4.147797219261885D-02 .1378416584795677 .2943696722771628
1.440475474556501D-02 -.0083535143351593 -.3274154130350738 -.2653998678243391
-.1746672072945834 5.777589655570456D-02 -1.576624335595933D-02 1.260050870337138D-02 -9.500604317891942D-02
-.2142074852132891 -1.520659230295378D-02 -4.05343048524955D-03 .2265545617468662 .1888969597468942
-.3193279093681228 3.209071273085988D-03 3.657042088435841D-02 9.381033772397572D-02 -.1424842245993918 -.4713353843595302
-1.792847796403807D-02 3.20231058177791D-03 .3567250566556106 .4030830457667857
-4.837237358381204D-02 -3.320527547062201D-03 .0950093435374355 .0658446233846614 -2.581488049046575D-02
7.272299429858363D-02 4.31482025255053D-03 -7.75629195553785D-03 -.1244418024644492 6.039250212145875D-02
.164392335171408 -2.577855931232435D-02 5.741484040138011D-02 -1.925176041828957D-02 .1243126216681165 .2797468118674807
1.404882921613035D-02 9.623913049691494D-03 -.2330004659649894 -.323849393657742
-3.488431931431221D-02 1.409035798170472D-04 -7.749143924883311D-03 2.409272085032913D-03 -1.662522192467034D-02
-6.440882390505992D-02 -2.680326709890094D-03 1.977187599652812D-02 5.365017671853926D-02 4.706197326130158D-02
-.1245477146274975 -9.635514139758811D-04 -5.648546132692318D-03 3.021620886444868D-02 -7.490843521263875D-02
-.1556368096650126 7.415057417898667D-03 7.708799367935433D-04 .1496426842807945 .1494917667736861
-.6169445396586921 2.300369073589523D-02 -2.302354900150798D-02 .122990694937877 -.3535726775513383 -.7571499250565438
-4.761886361794521D-02 5.108122101727305D-03 .8171833356309375 .6972522541317686
.8881926780379885 -.0385788151899079 -.010020636794621 -.2106725980312981 .4169280472202694 1.008639615533935
4.693229629133472D-02 -6.94974881369956D-03 -.9123211833102881 -.9671235683204802

RC> ENTER COMMAND: continue

RC> Input Matrix set to last Result Matrix

RC> ENTER COMMAND: mult scaler

Enter Scaler Multiplier: .5

..... [Result] = .5 * [Matrix-In]

4.325317984641964D-02 -1.454400142616555D-03 -.011877650829544 -2.449947069659538D-02 3.555436178452864D-02
4.483347537548835D-02 2.085402137343352D-03 -1.549308806206634D-03 -.0395999089675882 -2.873831339015583D-02
.1152717241208727 -7.986600589775187D-03 -1.342582425981073D-03 2.073898609630942D-02 6.892082923978383D-02
.1471848361385814 7.202377372782507D-03 -4.17675716757965D-03 -.163707706517537 -.1326999339121695
-8.733360364729172D-02 2.888794827785228D-02 -7.883121677979665D-03 6.300254351685692D-03 -4.750302158945971D-02
-.1071037426066446 -7.603296151476888D-03 -2.026715242624775D-03 .1132772808734331 9.444847987344708D-02
-.1596639546840614 1.604535636542994D-03 .0182852104421792 4.690516886198786D-02 -7.124211229969592D-02 -.2356676921797651
-8.964238982019033D-03 1.601155290888955D-03 .1783625283278053 .201541522883393
-2.418618679190602D-02 -1.660263773531101D-03 4.750467176871775D-02 .0329223116923307 -1.290744024523287D-02
3.636149714929181D-02 2.157410126275265D-03 -3.878145977768925D-03 -6.222090123222462D-02 3.019625106072937D-02

8.219616758570394D-02 -1.288927965616218D-02 2.870742020069006D-02 -9.625880209144785D-03 6.215631083405825D-02
.1398734059337404 7.024414608065173D-03 4.811956524845747D-03 -.1165002329824947 -.161924696828871
-.0174421596571561 7.04517899085236D-05 -3.874571962441656D-03 1.204636042516457D-03 -8.312610962335171D-03
-3.220441195252996D-02 -1.340163354945047D-03 9.885937998264061D-03 2.682508835926963D-02 .0235309866306508
-6.227385731374873D-02 -4.817757069879406D-04 -2.82427306634616D-03 1.510810443222434D-02 -3.745421760631937D-02
-.0778184048325063 3.707528708949334D-03 3.854399683967716D-04 7.482134214039726D-02 7.474588338684306D-02
-.3084722698293461 1.150184536794762D-02 -.011511774500754 6.149534746893843D-02 -.1767863387756692 -.378574962528272
-.0238094318089726 2.554061050863653D-03 .4085916678154687 .3486261270658843
.4440963390189943 -1.928940759495395D-02 -5.010318397310493D-03 -.105336299015649 .2084640236101347 .5043198077669677
2.346614814566736D-02 -3.47487440684978D-03 -.4561605916551441 -.4835617841602401

RC> ENTER COMMAND: continue

RC> Input Matrix set to last Result Matrix

RC> ENTER COMMAND: mult

Enter Matrix-Sub COLS: 2

INPUT MODES

1 → READ from hardcoded data

Any → INPUT MANUALLY

RC> Choose Input Mode for [Matrix-Sub] (10×2) : 1

..... Matrix-Sub

7 3
7 3
7 3
8 3
-5 78
3 6
2 -5
2 5
2 6
2 7

Enter Matrix-In entries scale: 1

Enter Matrix-Sub entries scale: -1

..... [Result] = (1 * [Matrix-In]) X (-1 * [Matrix-Sub])

.1654235043023422 -2.601564843724786
-.417695998274108 -4.670936829946686
.1015040256855262 3.159257758805937
.2088886893421512 4.715705230169805
-.521116962589672 .8169991880340421
-.184754661512485 -4.109061398309084
7.633335224712814D-02 .5199371148026226
.0770582452085343 2.584216014405003
.447280958443541 11.77799439349828
-.7270630001590124 -13.97289247841043

RC> ENTER COMMAND: continue

RC> Input Matrix set to last Result Matrix

RC> ENTER COMMAND: add

INPUT MODES

1 → READ from hardcoded data

Any → INPUT MANUALLY

RC> Choose Input Mode for [Matrix-Sub] (10×2) : 0

..... Input Matrix-Sub (10×2)

ROW 1
Matrix-Sub (1,1) : 2
Matrix-Sub (1,2) : 1

ROW 2
Matrix-Sub (2,1) : 3
Matrix-Sub (2,2) : 1

ROW 3
Matrix-Sub (3,1) : 4
Matrix-Sub (3,2) : 2

ROW 4
Matrix-Sub (4,1) : 4
Matrix-Sub (4,2) : 2

ROW 5
Matrix-Sub (5,1) : 0
Matrix-Sub (5,2) : 2

ROW 6
Matrix-Sub (6,1) : 5
Matrix-Sub (6,2) : 2

ROW 7
Matrix-Sub (7,1) : 5
Matrix-Sub (7,2) : 2

ROW 8
Matrix-Sub (8,1) : 5
Matrix-Sub (8,2) : 2

ROW 9
Matrix-Sub (9,1) : 5
Matrix-Sub (9,2) : 2

ROW 10
Matrix-Sub (10,1) : 5
Matrix-Sub (10,2) : 2

..... Matrix-Sub

2 1
3 1
4 2
4 2
0 2
5 2
5 2
5 2
5 2
5 2

Enter Matrix-In entries scale: 4
Enter Matrix-Sub entries scale: -1

..... [Result] = (4 * [Matrix-In]) + (-1 * [Matrix-Sub])

-1.338305982790631 -11.40625937489914
-4.670783993096432 -19.68374731978674
-3.593983897257895 10.63703103522375
-3.164445242631396 16.86282092067922
-2.084467850358688 1.26799675213617

-5.73901864604994 -18.43624559323634
-4.694666591011488 7.974845921049045D-02
-4.691767019165863 8.33686405762001
-3.210876166225836 45.11197757399313
-7.90825200063605 -57.8915699136417

RC> ENTER COMMAND: continue
RC> Input Matrix set to last Result Matrix

RC> ENTER COMMAND: det
ERR: Determinant is only defined for a square matrix, given matrix order: (10×2)

RC> ENTER COMMAND: mult
Enter Matrix-Sub COLS: 10

INPUT MODES

1 → READ from hardcoded data
Any → INPUT MANUALLY

RC> Choose Input Mode for [Matrix-Sub] (2×10) : 1

..... Matrix-Sub

2 7 3 7 2 6 2 5 2 4
2 6 2 5 1 3 4 2 23 12

Enter Matrix-In entries scale: 1
Enter Matrix-Sub entries scale: -1

..... [Result] = (1 * [Matrix-In]) X (-1 * [Matrix-Sub])

25.48913071537955 77.80569812892928 26.82743669817018 66.39943875403014 14.08287134048041 42.24861402144122 48.30164946517784
29.50404866375144 265.0205775882616 142.2283364299522
48.70906262576635 150.7979718703955 53.3798466188628 131.1142245506088 29.02531530597961 87.07594591793881 88.07655726533983
62.72141460505564 462.067756341288 254.8881038098266
-14.0860942759317 -38.66429893053721 -10.49211037867381 -28.02726789531346 -3.449063240707956 -10.34718972212387
-35.3601563463792 -3.304142584158015 -237.4637460156304 -113.2684368336534
-27.39675135609565 -79.02580882565555 -24.23230611346425 -62.16298790497632 -10.53393043541643 -31.60179130624928
-61.1223931974541 -17.90341562820146 -381.5159906903593 -189.6960700776251
1.632942196445038 6.9832944396938 3.717410046803725 8.25129119182997 2.900938948581206 8.70281684574362 -.9030513078272993
7.886345747521101 -24.9949895984145 -6.878089624199273
48.35052847857256 150.7906040817676 54.0895471246225 132.3543584885313 29.91428288533622 89.74284865600865
85.22301966504523 65.56758441672238 435.5116859365356 244.1910217030358
9.229836263601994 32.38417538181747 13.92450285461348 32.46392384102796 9.309584722812485 27.92875416843746 9.070339345181013
23.31383603663646 7.555118620181695 17.82168485352006
-7.290194076908294 -17.17881521155902 -2.59842705774243 -8.841951153939014 1.046669980711716 3.140009942135151 -23.96392219214832
6.785106980589294 -182.3643392869285 -81.27530061477667
-83.8022028155346 -248.195732280378 -80.59132664930875 -203.0837547063848 -38.69022524154146 -116.0706757246244
-174.026157963521 -74.16957431685708 -1031.15373186939 -528.5002262230142
131.5996438285555 402.7071834863025 139.5078958291916 344.815613572661 73.7080739149138 221.1242217447414 247.382783655839
155.3243998304636 1347.322612015031 726.3318469662446

RC> ENTER COMMAND: continue
RC> Input Matrix set to last Result Matrix

RC> ENTER COMMAND: det
DETERMINANT([Matrix-In]): 1.419451996170278D-30

RC> ENTER COMMAND: