
```
% Jonah Brooks, MATLAB tutorial
```

```
tut1 = [ 1 2 3 4 5; 5 4 3 2 1 ]
tut2 = [ 9 8 7 6 5; 5 6 7 8 9 ]
```

```
size (tut1)
size (tut2)
```

```
all = 1:1:100
evens = 2:2:1001
```

```
sum (all)
all*ones(1,numel(all))'
sum (evens)
evens*ones(1,numel(evens))'
```

```
tut1 .* tut2
```

```
x = -2*pi:0.1:2*pi
y = sin(x).*cos(x).^2
plot(x,y)
```

```
hold on
plot(x,cos(x),'--')
hold off
```

```
tut1 =

     1     2     3     4     5
     5     4     3     2     1
```

```
tut2 =

     9     8     7     6     5
     5     6     7     8     9
```

```
ans =

     2     5
```

```
ans =

     2     5
```

```
all =
```

Columns 1 through 13

1 2 3 4 5 6 7 8 9 10 11 12

Columns 14 through 26

14 15 16 17 18 19 20 21 22 23 24 25

Columns 27 through 39

27 28 29 30 31 32 33 34 35 36 37 38

Columns 40 through 52

40 41 42 43 44 45 46 47 48 49 50 51

Columns 53 through 65

53 54 55 56 57 58 59 60 61 62 63 64

Columns 66 through 78

66 67 68 69 70 71 72 73 74 75 76 77

Columns 79 through 91

79 80 81 82 83 84 85 86 87 88 89 90

Columns 92 through 100

92 93 94 95 96 97 98 99 100

evens =

Columns 1 through 6

2 4 6 8 10 12

Columns 7 through 12

14 16 18 20 22 24

Columns 13 through 18

26 28 30 32 34 36

Columns 19 through 24

38 40 42 44 46 48

Columns 25 through 30

50 52 54 56 58 60

Columns 31 through 36

62	64	66	68	70	72
----	----	----	----	----	----

Columns 37 through 42

74	76	78	80	82	84
----	----	----	----	----	----

Columns 43 through 48

86	88	90	92	94	96
----	----	----	----	----	----

Columns 49 through 54

98	100	102	104	106	108
----	-----	-----	-----	-----	-----

Columns 55 through 60

110	112	114	116	118	120
-----	-----	-----	-----	-----	-----

Columns 61 through 66

122	124	126	128	130	132
-----	-----	-----	-----	-----	-----

Columns 67 through 72

134	136	138	140	142	144
-----	-----	-----	-----	-----	-----

Columns 73 through 78

146	148	150	152	154	156
-----	-----	-----	-----	-----	-----

Columns 79 through 84

158	160	162	164	166	168
-----	-----	-----	-----	-----	-----

Columns 85 through 90

170	172	174	176	178	180
-----	-----	-----	-----	-----	-----

Columns 91 through 96

182	184	186	188	190	192
-----	-----	-----	-----	-----	-----

Columns 97 through 102

194	196	198	200	202	204
-----	-----	-----	-----	-----	-----

Columns 103 through 108

206	208	210	212	214	216
-----	-----	-----	-----	-----	-----

Columns 109 through 114

218	220	222	224	226	228
<i>Columns 115 through 120</i>					
230	232	234	236	238	240
<i>Columns 121 through 126</i>					
242	244	246	248	250	252
<i>Columns 127 through 132</i>					
254	256	258	260	262	264
<i>Columns 133 through 138</i>					
266	268	270	272	274	276
<i>Columns 139 through 144</i>					
278	280	282	284	286	288
<i>Columns 145 through 150</i>					
290	292	294	296	298	300
<i>Columns 151 through 156</i>					
302	304	306	308	310	312
<i>Columns 157 through 162</i>					
314	316	318	320	322	324
<i>Columns 163 through 168</i>					
326	328	330	332	334	336
<i>Columns 169 through 174</i>					
338	340	342	344	346	348
<i>Columns 175 through 180</i>					
350	352	354	356	358	360
<i>Columns 181 through 186</i>					
362	364	366	368	370	372
<i>Columns 187 through 192</i>					
374	376	378	380	382	384

Columns 193 through 198

386	388	390	392	394	396
-----	-----	-----	-----	-----	-----

Columns 199 through 204

398	400	402	404	406	408
-----	-----	-----	-----	-----	-----

Columns 205 through 210

410	412	414	416	418	420
-----	-----	-----	-----	-----	-----

Columns 211 through 216

422	424	426	428	430	432
-----	-----	-----	-----	-----	-----

Columns 217 through 222

434	436	438	440	442	444
-----	-----	-----	-----	-----	-----

Columns 223 through 228

446	448	450	452	454	456
-----	-----	-----	-----	-----	-----

Columns 229 through 234

458	460	462	464	466	468
-----	-----	-----	-----	-----	-----

Columns 235 through 240

470	472	474	476	478	480
-----	-----	-----	-----	-----	-----

Columns 241 through 246

482	484	486	488	490	492
-----	-----	-----	-----	-----	-----

Columns 247 through 252

494	496	498	500	502	504
-----	-----	-----	-----	-----	-----

Columns 253 through 258

506	508	510	512	514	516
-----	-----	-----	-----	-----	-----

Columns 259 through 264

518	520	522	524	526	528
-----	-----	-----	-----	-----	-----

Columns 265 through 270

530	532	534	536	538	540
-----	-----	-----	-----	-----	-----

Columns 271 through 276

542	544	546	548	550	552
<i>Columns 277 through 282</i>					
554	556	558	560	562	564
<i>Columns 283 through 288</i>					
566	568	570	572	574	576
<i>Columns 289 through 294</i>					
578	580	582	584	586	588
<i>Columns 295 through 300</i>					
590	592	594	596	598	600
<i>Columns 301 through 306</i>					
602	604	606	608	610	612
<i>Columns 307 through 312</i>					
614	616	618	620	622	624
<i>Columns 313 through 318</i>					
626	628	630	632	634	636
<i>Columns 319 through 324</i>					
638	640	642	644	646	648
<i>Columns 325 through 330</i>					
650	652	654	656	658	660
<i>Columns 331 through 336</i>					
662	664	666	668	670	672
<i>Columns 337 through 342</i>					
674	676	678	680	682	684
<i>Columns 343 through 348</i>					
686	688	690	692	694	696
<i>Columns 349 through 354</i>					
698	700	702	704	706	708

Columns 355 through 360

710	712	714	716	718	720
-----	-----	-----	-----	-----	-----

Columns 361 through 366

722	724	726	728	730	732
-----	-----	-----	-----	-----	-----

Columns 367 through 372

734	736	738	740	742	744
-----	-----	-----	-----	-----	-----

Columns 373 through 378

746	748	750	752	754	756
-----	-----	-----	-----	-----	-----

Columns 379 through 384

758	760	762	764	766	768
-----	-----	-----	-----	-----	-----

Columns 385 through 390

770	772	774	776	778	780
-----	-----	-----	-----	-----	-----

Columns 391 through 396

782	784	786	788	790	792
-----	-----	-----	-----	-----	-----

Columns 397 through 402

794	796	798	800	802	804
-----	-----	-----	-----	-----	-----

Columns 403 through 408

806	808	810	812	814	816
-----	-----	-----	-----	-----	-----

Columns 409 through 414

818	820	822	824	826	828
-----	-----	-----	-----	-----	-----

Columns 415 through 420

830	832	834	836	838	840
-----	-----	-----	-----	-----	-----

Columns 421 through 426

842	844	846	848	850	852
-----	-----	-----	-----	-----	-----

Columns 427 through 432

854	856	858	860	862	864
-----	-----	-----	-----	-----	-----

Columns 433 through 438

866	868	870	872	874	876
<i>Columns 439 through 444</i>					
878	880	882	884	886	888
<i>Columns 445 through 450</i>					
890	892	894	896	898	900
<i>Columns 451 through 456</i>					
902	904	906	908	910	912
<i>Columns 457 through 462</i>					
914	916	918	920	922	924
<i>Columns 463 through 468</i>					
926	928	930	932	934	936
<i>Columns 469 through 474</i>					
938	940	942	944	946	948
<i>Columns 475 through 480</i>					
950	952	954	956	958	960
<i>Columns 481 through 486</i>					
962	964	966	968	970	972
<i>Columns 487 through 492</i>					
974	976	978	980	982	984
<i>Columns 493 through 498</i>					
986	988	990	992	994	996
<i>Columns 499 through 500</i>					
998	1000				

ans =

5050

ans =

5050

ans =

250500

ans =

250500

ans =

9	16	21	24	25
25	24	21	16	9

x =

Columns 1 through 7

-6.2832	-6.1832	-6.0832	-5.9832	-5.8832	-5.7832	-5.6832
---------	---------	---------	---------	---------	---------	---------

Columns 8 through 14

-5.5832	-5.4832	-5.3832	-5.2832	-5.1832	-5.0832	-4.9832
---------	---------	---------	---------	---------	---------	---------

Columns 15 through 21

-4.8832	-4.7832	-4.6832	-4.5832	-4.4832	-4.3832	-4.2832
---------	---------	---------	---------	---------	---------	---------

Columns 22 through 28

-4.1832	-4.0832	-3.9832	-3.8832	-3.7832	-3.6832	-3.5832
---------	---------	---------	---------	---------	---------	---------

Columns 29 through 35

-3.4832	-3.3832	-3.2832	-3.1832	-3.0832	-2.9832	-2.8832
---------	---------	---------	---------	---------	---------	---------

Columns 36 through 42

-2.7832	-2.6832	-2.5832	-2.4832	-2.3832	-2.2832	-2.1832
---------	---------	---------	---------	---------	---------	---------

Columns 43 through 49

-2.0832	-1.9832	-1.8832	-1.7832	-1.6832	-1.5832	-1.4832
---------	---------	---------	---------	---------	---------	---------

Columns 50 through 56

-1.3832	-1.2832	-1.1832	-1.0832	-0.9832	-0.8832	-0.7832
---------	---------	---------	---------	---------	---------	---------

Columns 57 through 63

-0.6832 -0.5832 -0.4832 -0.3832 -0.2832 -0.1832 -0.0832

Columns 64 through 70

0.0168 0.1168 0.2168 0.3168 0.4168 0.5168 0.6168

Columns 71 through 77

0.7168 0.8168 0.9168 1.0168 1.1168 1.2168 1.3168

Columns 78 through 84

1.4168 1.5168 1.6168 1.7168 1.8168 1.9168 2.0168

Columns 85 through 91

2.1168 2.2168 2.3168 2.4168 2.5168 2.6168 2.7168

Columns 92 through 98

2.8168 2.9168 3.0168 3.1168 3.2168 3.3168 3.4168

Columns 99 through 105

3.5168 3.6168 3.7168 3.8168 3.9168 4.0168 4.1168

Columns 106 through 112

4.2168 4.3168 4.4168 4.5168 4.6168 4.7168 4.8168

Columns 113 through 119

4.9168 5.0168 5.1168 5.2168 5.3168 5.4168 5.5168

Columns 120 through 126

5.6168 5.7168 5.8168 5.9168 6.0168 6.1168 6.2168

$y =$

Columns 1 through 7

0.0000 0.0988 0.1908 0.2697 0.3304 0.3692 0.3846

Columns 8 through 14

0.3769 0.3482 0.3027 0.2456 0.1834 0.1224 0.0689

Columns 15 through 21

0.0285 0.0050 0.0009 0.0165 0.0503 0.0989 0.1575

Columns 22 through 28

0.2200 0.2800 0.3310 0.3673 0.3841 0.3785 0.3493

Columns 29 through 35

0.2974 0.2256 0.1383 0.0415 -0.0582 -0.1538 -0.2389

Columns 36 through 42

-0.3076 -0.3559 -0.3811 -0.3828 -0.3624 -0.3233 -0.2704

Columns 43 through 49

-0.2095 -0.1472 -0.0899 -0.0434 -0.0125 -0.0002 -0.0076

Columns 50 through 56

-0.0342 -0.0772 -0.1323 -0.1939 -0.2558 -0.3113 -0.3543

Columns 57 through 63

-0.3797 -0.3837 -0.3643 -0.3216 -0.2576 -0.1761 -0.0825

Columns 64 through 70

0.0168 0.1150 0.2052 0.2813 0.3385 0.3735 0.3849

Columns 71 through 77

0.3734 0.3416 0.2937 0.2354 0.1728 0.1127 0.0611

Columns 78 through 84

0.0232 0.0029 0.0021 0.0209 0.0575 0.1082 0.1679

Columns 85 through 91

0.2305 0.2894 0.3383 0.3716 0.3848 0.3753 0.3421

Columns 92 through 98

0.2866 0.2118 0.1225 0.0248 -0.0747 -0.1690 -0.2517

Columns 99 through 105

-0.3173 -0.3618 -0.3830 -0.3808 -0.3571 -0.3153 -0.2605

Columns 106 through 112

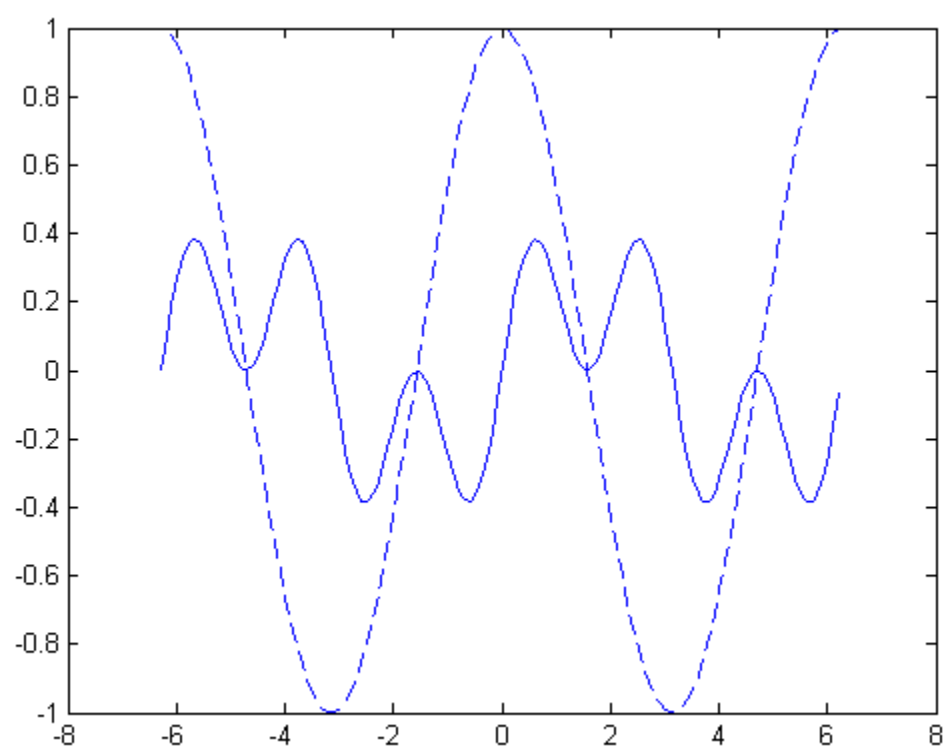
-0.1989 -0.1370 -0.0812 -0.0370 -0.0091 -0.0000 -0.0108

Columns 113 through 119

-0.0404 -0.0857 -0.1423 -0.2045 -0.2657 -0.3196 -0.3600

Columns 120 through 126

-0.3820 -0.3821 -0.3587 -0.3123 -0.2450 -0.1611 -0.0660



Published with MATLAB® R2013b