

svd_power input1.txt 2 10

Matrix U:

| | | |
|--------|--------|---------|
| Row 1: | 0.5096 | -0.3027 |
| Row 2: | 0.3423 | 0.5300 |
| Row 3: | 0.2466 | 0.2613 |
| Row 4: | 0.3953 | -0.4016 |
| Row 5: | 0.1285 | 0.4181 |
| Row 6: | 0.5451 | -0.2120 |
| Row 7: | 0.3041 | 0.4220 |

Matrix S:

| | | |
|--------|--------|--------|
| Row 1: | 2.9929 | 0.0000 |
| Row 2: | 0.0000 | 2.2147 |

Matrix V:

| | | |
|--------|--------|---------|
| Row 1: | 0.3411 | 0.7371 |
| Row 2: | 0.4846 | -0.4131 |
| Row 3: | 0.1703 | -0.1364 |
| Row 4: | 0.3024 | -0.3175 |
| Row 5: | 0.0429 | 0.1888 |
| Row 6: | 0.5683 | 0.1983 |
| Row 7: | 0.1821 | -0.0956 |
| Row 8: | 0.1143 | 0.2395 |
| Row 9: | 0.3966 | -0.1587 |

Reconstruction ($U \cdot S \cdot V.T$):

| | | | | | | | | | |
|--------|---------|---------|---------|---------|---------|--------|---------|---------|--------|
| Row 1: | 0.0261 | 1.0160 | 0.3511 | 0.6741 | -0.0612 | 0.7338 | 0.3419 | 0.0138 | 0.7113 |
| Row 2: | 1.2148 | 0.0115 | 0.0144 | -0.0629 | 0.2656 | 0.8150 | 0.0744 | 0.3983 | 0.2201 |
| Row 3: | 0.6784 | 0.1186 | 0.0468 | 0.0395 | 0.1410 | 0.5343 | 0.0791 | 0.2230 | 0.2009 |
| Row 4: | -0.2521 | 0.9407 | 0.3227 | 0.6402 | -0.1172 | 0.4959 | 0.3005 | -0.0778 | 0.6104 |
| Row 5: | 0.8137 | -0.1961 | -0.0608 | -0.1777 | 0.1914 | 0.4022 | -0.0184 | 0.2657 | 0.0056 |
| Row 6: | 0.2104 | 0.9844 | 0.3418 | 0.6424 | -0.0187 | 0.8340 | 0.3420 | 0.0740 | 0.7216 |
| Row 7: | 0.9993 | 0.0549 | 0.0275 | -0.0215 | 0.2155 | 0.7025 | 0.0765 | 0.3279 | 0.2127 |

svd_power input1.txt 4 100

Matrix U:

| | | | | |
|--------|--------|---------|---------|---------|
| Row 1: | 0.5098 | -0.3014 | -0.5931 | 0.3567 |
| Row 2: | 0.3420 | 0.5308 | -0.2658 | -0.1579 |
| Row 3: | 0.2465 | 0.2610 | 0.5642 | 0.1570 |
| Row 4: | 0.3955 | -0.4015 | 0.3596 | 0.3928 |
| Row 5: | 0.1282 | 0.4180 | 0.1980 | 0.4751 |
| Row 6: | 0.5452 | -0.2116 | 0.2513 | -0.6618 |
| Row 7: | 0.3038 | 0.4226 | -0.1662 | -0.0723 |

Matrix S:

| | | | | |
|--------|--------|--------|--------|--------|
| Row 1: | 2.9929 | 0.0000 | 0.0000 | 0.0000 |
| Row 2: | 0.0000 | 2.2147 | 0.0000 | 0.0000 |
| Row 3: | 0.0000 | 0.0000 | 1.6335 | 0.0000 |
| Row 4: | 0.0000 | 0.0000 | 0.0000 | 1.3586 |

Matrix V:

| | | | | |
|--------|--------|---------|--------|--------|
| Row 1: | 0.3410 | 0.7371 | 0.2022 | 0.2958 |
| Row 2: | 0.4847 | -0.4129 | 0.0109 | 0.0645 |

