

| Dimension | Enjambre | Iteraciones | Mejor Punto | Mejor Valor | Tiempo Ejecucion | Cercania |
|-----------|----------|-------------|------------------------------------|-------------|------------------|----------|
| 10 | 100 | 200 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 0.554982 | 0 |
| 10 | 100 | 300 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 0.786418 | 0 |
| 10 | 100 | 500 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 1.28585 | 0 |
| 10 | 100 | 700 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 1.74933 | 0 |
| 10 | 100 | 1000 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 2.58402 | 0 |
| 10 | 200 | 200 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 1.08815 | 0 |
| 10 | 200 | 300 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 1.5472 | 0 |
| 10 | 200 | 500 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 2.53702 | 0 |
| 10 | 200 | 700 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 3.55054 | 0 |
| 10 | 200 | 1000 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 5.01762 | 0 |
| 10 | 300 | 200 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 1.61077 | 0 |
| 10 | 300 | 300 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 2.26315 | 0 |
| 10 | 300 | 500 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 3.78017 | 0 |
| 10 | 300 | 700 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 5.42388 | 0 |
| 10 | 300 | 1000 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 7.49168 | 0 |
| 10 | 400 | 200 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 2.03255 | 0 |
| 10 | 400 | 300 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 3.07741 | 0 |

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| 10 | 400 | 500 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 5.04528 | 0 |
| 10 | 400 | 700 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 7.14683 | 0 |
| 10 | 400 | 1000 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 10.092 | 0 |
| 10 | 500 | 200 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 2.54286 | 0 |
| 10 | 500 | 300 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 3.78562 | 0 |
| 10 | 500 | 500 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 6.37379 | 0 |
| 10 | 500 | 700 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 8.78774 | 0 |
| 10 | 500 | 1000 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2 | 12.7628 | 0 |
| 30 | 100 | 200 | [0.4 0.7 1. 0.8 1. 1. 1. 1. 1. 1. 0. 0. 1. 1. 0.9 1.] | 941 | 0.834283 | 939 |
| | | | 1. 1. 0.8 1. 1. 1. 1. 1. 1. 1. 1. 0.9] | | | |
| 30 | 100 | 300 | [0.5 0.7 1. 0.9 1. 1. 1. 1. 1. 1. 0.7 1. 1. 1. 0.8 1. 1. 1.] | 81.6 | 1.21902 | 79.6 |
| | | | 1. 1. 1. 0.9 1. 1. 1. 1. 0.5 0.6 1. 1.] | | | |
| 30 | 100 | 500 | [1. 1. 0.9 1. 1. 1. 1. 0.4 1. 1. 1. 1. 1. 1. 1. 0.5 1. 0.8] | 87.5 | 1.97711 | 85.5 |
| | | | 1. 1. 1. 1. 0.7 1. 0.8 1. 0.8 1. 1. 1.] | | | |
| 30 | 100 | 700 | [1. 1. 1. 0.9 1. 1. 1. 1. 1. 1. 1. 0.7 0.9 1. 1. 1. 0.9 0.8] | 62.3 | 2.79054 | 60.3 |
| | | | 1. 1. 1. 1. 1. 1. 1. 0.7 1. 0.5 1. 0.9 0.7] | | | |
| 30 | 100 | 1000 | [1. 1. 1. 1. 1. 1. 0.7 1. 1. 1. 1. 1. 1. 1.] | 262.4 | 3.76545 | 260.4 |

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|----|-----|------|---|------|---------|------|
| | | | 1. 1. 1. 0.2 1. | | | |
| | | | 0.6 0.7 1. 0.3 1. 1. 1. 1. 1. 1. 1. 1.] | | | |
| 30 | 200 | 200 | [0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9 0.1 1. 1. 1.] | 12.3 | 1.62282 | 10.3 |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.8] | | | |
| 30 | 200 | 300 | [0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9 1. 1. 1. 1. 1. 1.] | 6.3 | 2.43827 | 4.3 |
| | | | 0.8 1. 1. 1. 0.9 1. 1. 0.9 1. 0.9 1. 1.] | | | |
| 30 | 200 | 500 | [0.7 1. 0.6 1. 0.5 1. 1. 1. 1. 1. 1. 1. 1. 0.3 1. 1. 1. 1.] | 43.5 | 4.03508 | 41.5 |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9] | | | |
| 30 | 200 | 700 | [1. 1. 1. 1. 1. 1. 1. 0.7 1. 1. 1. 0.9 1. 1. 1. 1. 1. 1. 0.8] | 12 | 5.68862 | 10 |
| | | | 1. 1. 1. 1. 1. 1. 1. 0.5 0.9 1. 1. 1.] | | | |
| 30 | 200 | 1000 | [0.6 1. 0.7 1. 1. 1. 1. 1. 0.9 1. 1. 1. 1. 1. 1. 1. 1. 0.8] | 14 | 8.02333 | 12 |
| | | | 1. 1. 1. 1. 0.7 1. 1. 1. 1. 0.9 1. 0.9] | | | |
| 30 | 300 | 200 | [0. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 4.4 | 2.59118 | 2.4 |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9] | | | |
| 30 | 300 | 300 | [0.8 0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9 1. 1.] | 4.4 | 3.6321 | 2.4 |
| | | | 1. 0.8 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | | | |

| | | | | | | |
|----|-----|------|--|-----|---------|-----|
| 30 | 300 | 500 | [1. 1.] | 2 | 6.16432 | 0 |
| | | | | | | |
| 30 | 300 | 700 | [1. 1.] | 2.6 | 8.4923 | 0.6 |
| | | | | | | |
| 30 | 300 | 1000 | [0.2 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9 1. 1.] | 4.7 | 12.129 | 2.7 |
| | | | | | | |
| 30 | 400 | 200 | [1. 1.] | 2 | 3.56014 | 0 |
| | | | | | | |
| 30 | 400 | 300 | [1. 1.] | 2 | 4.98689 | 0 |
| | | | | | | |
| 30 | 400 | 500 | [1. 1.] | 2 | 8.01176 | 0 |
| | | | | | | |
| 30 | 400 | 700 | [1. 1.] | 2 | 11.3467 | 0 |
| | | | | | | |
| 30 | 400 | 1000 | [0. 1.] | 4 | 15.1246 | 2 |
| | | | | | | |
| 30 | 500 | 200 | [1. 1.] | 2.2 | 4.07954 | 0.2 |

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|----|-----|------|---|-------------|---------|-------------|
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9 1.] | | | |
| 30 | 500 | 300 | [1. 1.] | 2 | 6.07498 | 0 |
| | | | | | | |
| 30 | 500 | 500 | [0.8 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | 2.3 | 9.89371 | 0.3 |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.] | | | |
| 30 | 500 | 700 | [1. 1.] | 2 | 12.9542 | 0 |
| | | | | | | |
| 30 | 500 | 1000 | [1. 1.] | 2 | 19.6864 | 0 |
| | | | | | | |
| 50 | 100 | 200 | [0. 0.8 0.6 0.9 1. 0.9 1. 0.8 1. 1. 0.8 1. 0.9 0.7 0.1 0.7 1. 0.8 0.3 0.9 0.3 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.4 1. 1.] | 5.88412e+08 | 1.07042 | 5.88412e+08 |
| | | | | | | |
| | | | 0.7 0.8 0.9 0.7 0.2 1. 1. 1. 1. 0.5 0.9 1. 0.9 1.] | | | |
| 50 | 100 | 300 | [0.1 1. 1. 0.2 0.6 0.7 1. 0.8 1. 1. 1. 0.7 0.7 0.6 1. 1. 0.8 1. 0.8 1. 1. 0.9 0. 1. 0.6 0.4 0.8 1. 1. 1. 1. 0.5 1. 1. 1. 0.5 1. 1. 1. 1. 1. 0.9 0.8 0.8 1. 1. 1. 1. 0.7 1.] | 4.29603e+08 | 1.44476 | 4.29603e+08 |
| | | | | | | |
| | | | | | | |
| 50 | 100 | 500 | [1. 0.7 1. 1. 0.9 0.9 | 1.26462e+08 | 2.38482 | 1.26462e+08 |

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|----|-----|------|--|-------------|---------|-------------|
| | | | 1. 0.9 0.6 1. 1. 0.7 0.4 0.3 0.9 0.4 1. 1. | | | |
| | | | 1. 0.7 0.8 1. 0.5 0.9 1. 0.6 0.9 1. 0.9 1. 1. 1. 1. 0.9 0.9 1. | | | |
| | | | 0.8 1. 0.2 1. 1. 1. 0.8 1. 1. 0.9 0.4 0.7 1. 1.] | | | |
| 50 | 100 | 700 | [1. 1. 0.8 1. 1. 1. 1. 1. 0.9 1. 0.3 1. 1. 1. 0.2 1. 0.9 1. | 1.18393e+07 | 3.30232 | 1.18393e+07 |
| | | | 1. 1. 1. 0.8 0.7 1. 1. 0.8 0.7 1. 1. 1. 1. 1. 1. 0.8 0.8 0.5 | | | |
| | | | 0.7 0.9 1. 1. 0.7 1. 1. 1. 0.5 0.9 0.8 0.6 0.4 1.] | | | |
| 50 | 100 | 1000 | [1. 0.9 1. 1. 1. 1. 1. 0.6 1. 1. 1. 1. 0.9 0.6 1. 0. 0.9 0.4 | 1.03994e+07 | 4.39605 | 1.03994e+07 |
| | | | 1. 1. 0.2 1. 1. 0.8 1. 1. 1. 1. 1. 1. 0. 1. 0.9 1. 1. 1. | | | |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 0.2 0.9 0.9 1. 1. 0.4 0.6] | | | |
| 50 | 200 | 200 | [1. 1. 1. 0.7 0.4 1. 1. 0. 1. 1. 0.9 1. 1. 1. 1. 1. 1. 0.8 | 125401 | 1.92152 | 125399 |
| | | | 1. 1. 0.2 1. 1. 0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.7 1. | | | |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 0.1 1. 0.9 1. 0.5 1. 1.] | | | |
| 50 | 200 | 300 | [0.7 1. 1. 0.7 0.9 1. 0.8 1. 0.8 1. 1. 0.9 1. 0. 1. 1. 0.9 0.6 | 196660 | 2.95513 | 196658 |
| | | | 1. 0.8 1. 1. 0.6 1. 1. 1. 1. 1. 1. 0.6 1. 1. | | | |

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|----|-----|------|--|------------|---------|------------|
| | | | 1. 1. 1. 1. | | | |
| | | | 1. 1. 0.9 1. 1. 0.7 1. 1. 0.5 0.6 1. 1. 1. 0.5] | | | |
| 50 | 200 | 500 | [1. 0.7 1. 0.8 1. 0.5 1. 1. 1. 1. 0.1 1. 0.8 1. 1. 1. 1. 1. | 3.2618e+08 | 4.97626 | 3.2618e+08 |
| | | | 1. 0.7 0.5 0.9 0.7 0.7 0.7 0.6 1. 1. 1. 1. 1. 1. 0.8 0.7 1. 1. | | | |
| | | | 1. 1. 0.1 1. 0.5 0.8 0.5 1. 0.8 1. 1. 1. 0.8 0.3] | | | |
| 50 | 200 | 700 | [1. 0.2 1. 1. 0.8 0.7 0.3 1. 1. 0.7 1. 1. 0.1 1. 1. 0.8 1. 1. | 1.1609e+07 | 6.81634 | 1.1609e+07 |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.4 0.8 0.1 0.4 1. 1. 1. | | | |
| | | | 1. 1. 1. 1. 1. 1. 0.8 1. 1. 0.7 1. 1. 1. 1.] | | | |
| 50 | 200 | 1000 | [1. 0.4 1. 0.8 1. 1. 1. 0.7 0.8 1. 1. 0.8 1. 0.7 1. 1. 0.7 1. | 3112.4 | 9.77199 | 3110.4 |
| | | | 1. 1. 0.9 1. 1. 1. 1. 1. 1. 1. 1. 0.9 1. 1. 0.6 0.9 1. 1. | | | |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.8 1. 1. 0.] | | | |
| 50 | 300 | 200 | [0.5 0.9 0.7 1. 1. 1. 1. 1. 0.9 0.9 1. 1. 0.8 1. 1. 1. 1. 0.8 | 30249.4 | 2.88911 | 30247.4 |
| | | | 1. 0.2 0.5 1. 1. 1. 0. 1. 1. 1. 0.9 1. 0.8 1. 1. 0.9 1. 1. | | | |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.8 0.6 1. 1. 1. | | | |

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| | | |] | | | |
| 50 | 300 | 300 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 0.8 0.6 1. 1. 1. 1. 0.2 1. 1. | 383358 | 4.433 | 383356 |
| | | | 0.9 0.4 1. 1. 1. 1. 1. 0.3 1. 1. 1. 1. 1. 1. 0.8 0.8 0. | | | |
| | | | 1. 1. 1. 0.5 1. 0.5 1. 0.8 1. 0.9 1. 1. 1. 1.] | | | |
| 50 | 300 | 500 | [0.2 1. 0.5 0.9 1. 1. 1. 1. 1. 0.4 1. 1. 0.9 0.5 0.8 1. 1. 1. | 78451.1 | 7.06869 | 78449.1 |
| | | | 1. 1. 1. 0.4 1. 1. 1. 1. 0. 1. 1. 1. 1. 1. 1. 1. 1. 1. | | | |
| | | | 1. 1. 1. 1. 0.6 1. 1. 1. 1. 1. 1. 0.5 1. 1.] | | | |
| 50 | 300 | 700 | [1. 1. 1. 0. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9 1. 1. 1. | 10078.7 | 9.98081 | 10076.7 |
| | | | 1. 0.7 0.9 0.9 1. 1. 1. 1. 1. 1. 0.8 0.7 1. 1. 1. 1. 0.9 1. | | | |
| | | | 1. 1. 1. 1. 0.4 1. 0.7 0.5 0.8 1. 1. 1. 1. 0.8] | | | |
| 50 | 300 | 1000 | [0.9 0.8 1. 1. 1. 1. 1. 1. 0.4 1. 1. 1. 1. 1. 0. 0.6 1. | 3.08677e+06 | 12.9003 | 3.08677e+06 |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 0.7 1. 0.1 1. 1. 1. 1. 0.3 0.8 0.4 | | | |
| | | | 0.8 0.7 1. 1. 0.6 0.8 1. 1. 1. 1. 1. 1. 0.9 1.] | | | |
| 50 | 400 | 200 | [1. 1. 1. 1. 1. 1. 1. 1. 0.7 1. 1. 1. 0.6 1. 1. | 846.5 | 4.13166 | 844.5 |

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|----|-----|------|---|---------|---------|---------|
| | | | 1. 1. 0.1 1. | | | |
| | | | 1. 1. 1. 0.9 0.9 0.4 1. 1. 1. 0.5 1. 1. 1. 1. 1. 1. 1. 1. | | | |
| | | | 1. 1. 1. 1. 1. 0.9 1. 1. 1. 1. 1. 1. 1. 0.6] | | | |
| 50 | 400 | 300 | [1. 1. 1. 1. 1. 1. 1. 1. 0.5 1. 0.9 1. 0.8 0.8 1. 1. 0.8 1. 0.9 | 3274.7 | 5.87191 | 3272.7 |
| | | | 0.8 0.9 0. 0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | | | |
| | | | 1. 1. 1. 0.9 1. 0.9 1. 1. 1. 0.6 1. 1. 0.7 1.] | | | |
| 50 | 400 | 500 | [0.3 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.6 1. 1. 0.6 1. 1. 1. 0.8 | 5286.7 | 9.04319 | 5284.7 |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9 1. 0.5 1. 1. 1. 1. 0.7 1. 0.5 | | | |
| | | | 0.5 1. 1. 1. 0.8 0.9 0.8 1. 1. 1. 1. 1. 1. 0.8] | | | |
| 50 | 400 | 700 | [1. 1. 0.6 1. 1. 1. 1. 0.7 1. 0.6 1. 1. 0.7 1. 1. 1. 0. 1. 1. | 13403.8 | 13.6575 | 13401.8 |
| | | | 0.6 1. 0.9 1. 0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | | | |
| | | | 1. 1. 1. 1. 0.7 1. 0.5 0.9 1. 0.9 0.8 1. 1. 0.9] | | | |
| 50 | 400 | 1000 | [0.9 1. 1. 1. 1. 1. 1. 0.9 1. 1. 1. 1. 0.9 1. 1. 1. 1. 1. 1. | 59.1 | 19.3475 | 57.1 |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.8 1. 1. 1. 1. 1. | | | |

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| | | | 1. 1. 0.5 1. | | | |
| | | | 1. 1. 1. 1. 1. 0.7 1. 1. 0.8 1. 1. 1. 0.7 0.9] | | | |
| 50 | 500 | 200 | [0.9 1. 0.8 0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.3 1. 1. | 301.1 | 4.90373 | 299.1 |
| | | | 1. 0.8 1. 1. 0.7 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.6 0.9 | | | |
| | | | 1. 1. 1. 0.9 1. 1. 1. 1. 1. 1. 0.7 1. 0.9 1.] | | | |
| 50 | 500 | 300 | [1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.5 1. 1. 1. 1. 1. 1. | 807.8 | 7.3458 | 805.8 |
| | | | 1. 1. 1. 1. 0.6 1. 1. 0.6 1. 1. 0.8 1. 1. 1. 1. 0.9 0.4 0.6 | | | |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.7 1. 1. 1. 1. 1. 0.7] | | | |
| 50 | 500 | 500 | [1. 1. 0.9 1. 1. 1. 1. 0.8 1. 1. 0.9 1. 1. 1. 1. 0.6 1. 1. 1. | 598.5 | 12.2304 | 596.5 |
| | | | 1. 0.8 1. 1. 1. 1. 1. 0.7 1. 1. 0.8 1. 1. 1. 0.9 0.3 1. 1. 1. 1. | | | |
| | | | 1. 0.9 1. 1. 1. 1. 1. 0.8 1. 1. 1. 1. 1. 1. 1. 0.4] | | | |
| 50 | 500 | 700 | [1. 1. 0.9 0.6 1. 1. 1. 0.9 1. 1. 1. 1. 0.9 1. 1. 1. 1. 1. 1. | 11.1 | 17.0245 | 9.1 |
| | | | 0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | | | |
| | | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 0.9 1. 1. 1. 1. | | | |

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|----|-----|------|--|------|---------|------|
| | | | 0.9] | | | |
| 50 | 500 | 1000 | [1. 1. 1. 1. 1. 1. 1. 0.9 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | 57.9 | 24.6837 | 55.9 |
| | | | 1. 1. 1. 1. 1. 0.6 1. 1. 1. 1. 1. 1. 1. 0.8 1. 1. 0.7 1. | | | |
| | | | 1. 1. 1. 0.6 1. 1. 1. 1. 1. 1. 1. 1. 0.8 0.7] | | | |