# Example

Next table contains data on mortality due to malignant melanoma of the skin of white males during the period 1950–1969 for each state in the United States as well as the District of Columbia. No mortality data are available for Alaska and Hawaii for this period. It is well known that the incidence of melanoma can be related to the amount of sunshine and, somewhat equivalently, the latitude of the area. The table contains the latitude as well as the longitude for each state. These numbers were obtained simply by estimating the center of the state and reading off the latitude as given in a standard atlas. Finally, the 1965 population and contiguity to an ocean are noted, where “1” indicates contiguity: the state borders one of the oceans.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| State | Mortality per 10,000,000 | Latitude (deg) | Longitude (deg) | Population (millions, 1965) | Ocean State\* |
| Alabama | 219 | 33.0 | 87.0 | 3.5 | 1 |
| Arizona | 160 | 34.5 | 112.0 | 1.6 | 0 |
| Arkansas | 170 | 35.0 | 92.5 | 2.0 | 0 |
| California | 182 | 37.5 | 119.5 | 18.6 | 1 |
| Colorado | 149 | 39.0 | 105.5 | 2.0 | 0 |
| Connecticut | 159 | 41.8 | 72.8 | 2.8 | 1 |
| Delaware | 200 | 39.0 | 75.5 | 0.5 | 1 |
| Washington, DC | 177 | 39.0 | 77.0 | 0.8 | 0 |
| Florida | 197 | 28.0 | 82.0 | 5.8 | 1 |
| Georgia | 214 | 33.0 | 83.5 | 4.4 | 1 |
| Idaho | 116 | 44.5 | 114.0 | 0.7 | 0 |
| Illinois | 124 | 40.0 | 89.5 | 10.6 | 0 |
| Indiana | 128 | 40.2 | 86.2 | 4.9 | 0 |
| Iowa | 128 | 42.2 | 93.8 | 2.8 | 0 |
| Kansas | 166 | 38.5 | 98.5 | 2.2 | 0 |
| Kentucky | 147 | 37.8 | 85.0 | 3.2 | 0 |
| Louisiana | 190 | 31.2 | 91.8 | 3.5 | 1 |
| Maine | 117 | 45.2 | 69.0 | 1.0 | 1 |
| Maryland | 162 | 39.0 | 76.5 | 3.5 | 1 |
| Massachusetts | 143 | 42.2 | 71.8 | 5.4 | 1 |
| Michigan | 117 | 43.5 | 84.5 | 8.2 | 0 |
| Minnesota | 116 | 46.0 | 94.5 | 3.6 | 0 |
| Mississippi | 207 | 32.8 | 90.0 | 2.3 | 1 |
| Missouri | 131 | 38.5 | 92.0 | 4.5 | 0 |
| Montana | 109 | 47.0 | 110.5 | 0.7 | 0 |
| Nebraska | 122 | 41.5 | 99.5 | 1.5 | 0 |
| Nevada | 191 | 39.0 | 117.0 | 0.4 | 0 |
| New Hampshire | 129 | 43.8 | 71.5 | 0.7 | 1 |
| New Jersey | 159 | 40.2 | 74.5 | 6.8 | 1 |
| New Mexico | 141 | 35.0 | 106.0 | 1.0 | 0 |
| New York | 152 | 43.0 | 75.5 | 18.1 | 1 |
| North Carolina | 199 | 35.5 | 79.5 | 4.9 | 1 |
| North Dakota | 115 | 47.5 | 100.5 | 0.7 | 0 |
| Ohio | 131 | 40.2 | 82.8 | 10.2 | 0 |
| Oklahoma | 182 | 35.5 | 97.2 | 2.5 | 0 |
| Oregon | 136 | 44.0 | 120.5 | 1.9 | 1 |
| Pennsylvania | 132 | 40.8 | 77.8 | 11.5 | 0 |
| Rhode Island | 137 | 41.8 | 71.5 | 0.9 | 1 |
| South Carolina | 178 | 33.8 | 81.0 | 2.5 | 1 |
| South Dakota | 86 | 44.8 | 100.0 | 0.7 | 0 |
| Tennessee | 186 | 36.0 | 86.2 | 3.8 | 0 |
| Texas | 229 | 31.5 | 98.0 | 10.6 | 1 |
| Utah | 142 | 39.5 | 111.5 | 1.0 | 0 |
| Vermont | 153 | 44.0 | 72.5 | 0.4 | 1 |
| Virginia | 166 | 37.5 | 78.5 | 4.5 | 1 |
| Washington | 117 | 47.5 | 121.0 | 3.0 | 1 |
| West Viginia | 136 | 38.8 | 80.8 | 1.8 | 0 |
| Wisconsin | 110 | 44.5 | 90.2 | 4.1 | 0 |
| Wyoming | 134 | 43.0 | 107.5 | 0.3 | 0 |

*Source*: U.S. Department of Health, Education, and Welfare [1974].

\*1 = state borders on ocean.