Assume we have a grayscale image above, and the table denote the small region intensity. If we know that the image has been degraded by a constant power noise of 0.025, and the denote the grayscale at position \((i,j)\) by \(x(i,j)\), then

1. Design a Wiener filter to clean the image.
2. Find the grayscale value at position \((2,2)\) after applying a 3 by 3 Wiener filter.
3. Use `wiener2` from Matlab to experiment how \(N\) and \(M\) affect the outcome, where \(N \times M\) is the local square area we used to estimate the local mean and variance.