According to the definition of shepard interpolation, we can get function (*)

$$u(x) = \begin{cases} \dfrac{\sum_{i=1}^{N} w_i(x) u_i}{\sum_{i=1}^{N} w_i(x)} \\ u_i & \text{if } d(x, x_i) = 0 \end{cases} \qquad (*)$$

where $w_i(x) = \dfrac{1}{d(x, x_i)^p}$.

With requests from the problem that neighbors within a radius of 3 and exponent $p=2$. we get:

For point 7:

$d_1(x_1, x_7) = 1.80277$
$d_2(x_2, x_7) = 1.80277$
$d_3(x_3, x_7) = 0.5$
$d_4(x_4, x_7) = 2.5$
$d_5(x_5, x_7) = 3.5$
$d_6(x_6, x_7) = 3.20156$

So we consider points 1, 2, 3, 4

$$u(7) = \frac{\frac{10}{d_1^2} + \frac{9}{d_2^2} + \frac{4}{d_3^2} + \frac{7}{d_4^2}}{\sum_{i=1}^{4} 1/d_i^2} = 4.81$$

For point 8:

$d_1(x_1, x_8) = 3.640055$
$d_2(x_2, x_8) = 3.640055$
$d_3(x_3, x_8) = 1.5$
$d_4(x_4, x_8) = 2.061553$
$d_5(x_5, x_8) = 1.5$
$d_6(x_6, x_8) = 2.061553$

So we consider points 3, 4, 5, 6.

$$u(8) = \frac{\frac{4}{d_3^2} + \frac{7}{d_4^2} + \frac{11}{d_5^2} + \frac{13}{d_6^2}}{\sum_{i=3}^{6} 1/d_i^2} = 8.37$$