

## Exercise 4

### Exercise 4.1 - Grid Types

### Exercise 4.2 - Voronoi Diagram

### Exercise 4.3 - Bi-linear Interpolation

$$f_j = \frac{7-3}{7-2} \cdot 0.4 + \frac{3-2}{7-2} \cdot 0.1 = 0.8 \cdot 0.4 + 0.2 \cdot 0.1 = 0.34$$

$$f_{j+1} = 0.8 \cdot 0.2 + 0.2 \cdot (-0.2) = 0.12$$

$$f = \frac{5-3.5}{5-3} \cdot 0.34 + \frac{3.5-3}{5-3} \cdot 0.12 = 0.255 + 0.03 = \mathbf{0.285}$$

### Exercise 4.4 - ParaView: Color Mapping