Question #147
Key: D

Let $K_y(x)$ be the contribution at *x* of the data point at *y*. It is

$$K_y(x)=\begin{cases}0, & x<y-1.4\\ \dfrac{x-y+1.4}{2.8}, & y-1.4\le x\le y+1.4\\ 1, & x>y+1.4.\end{cases}$$

For the particular points,

$K_2(4)=1$, $K_{3.3}(4)=\dfrac{4-3.3+1.4}{2.8}=0.75$, $K_4(4)=0.5$, $K_{4.7}(4)=0.25$. The kernel estimate is the weighted average $\dfrac{1}{8}(1)+\dfrac{2}{8}(0.75)+\dfrac{2}{8}(0.5)+\dfrac{3}{8}(0.25)=0.53125$.