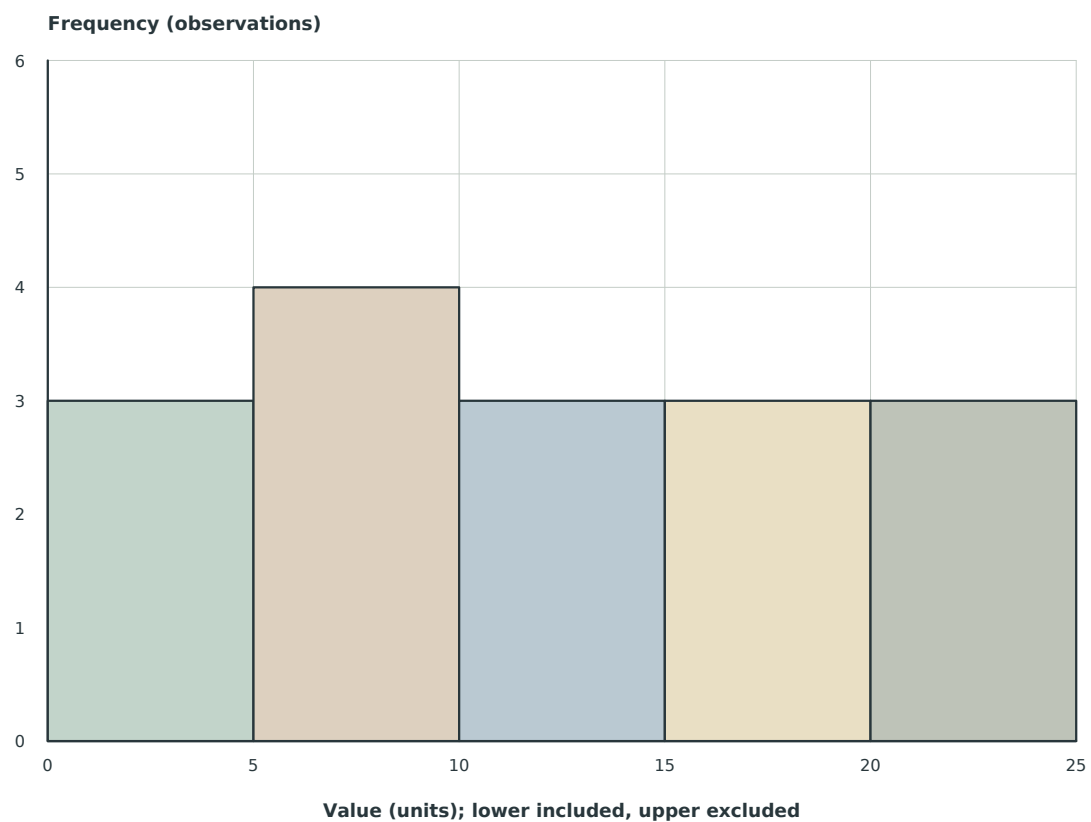


Equal five-unit bins

Fictional numerical data. Each bin includes its lower edge and excludes its upper edge: $[a,b)$. Equal-width bars touch.

Values: 0, 2, 4, 5, 5, 7, 9, 10, 12, 14, 15, 16, 19, 20, 22, 24 / bin edges: 0, 5, 10, 15, 20, 25

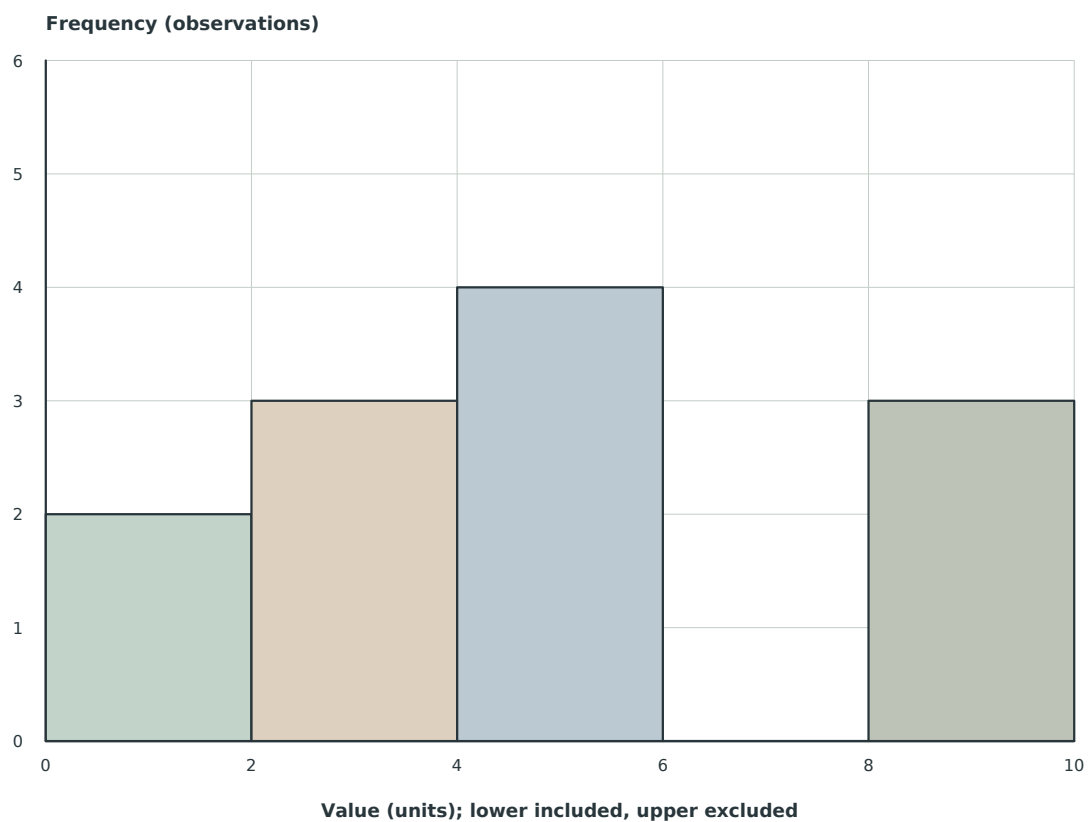


1. List bin frequencies from left to right. 3, 4, 3, 3, 3.
2. Check the total frequency. Total 16; all 16 observations counted once.
3. Where does the first internal boundary go? 5 belongs to $[5,10)$, not the first bin.

Equal two-unit bins

Fictional numerical data. Each bin includes its lower edge and excludes its upper edge: $[a,b)$. Equal-width bars touch.

Values: 0, 1, 2, 2, 3, 4, 5, 5, 5, 8, 8, 9 / bin edges: 0, 2, 4, 6, 8, 10

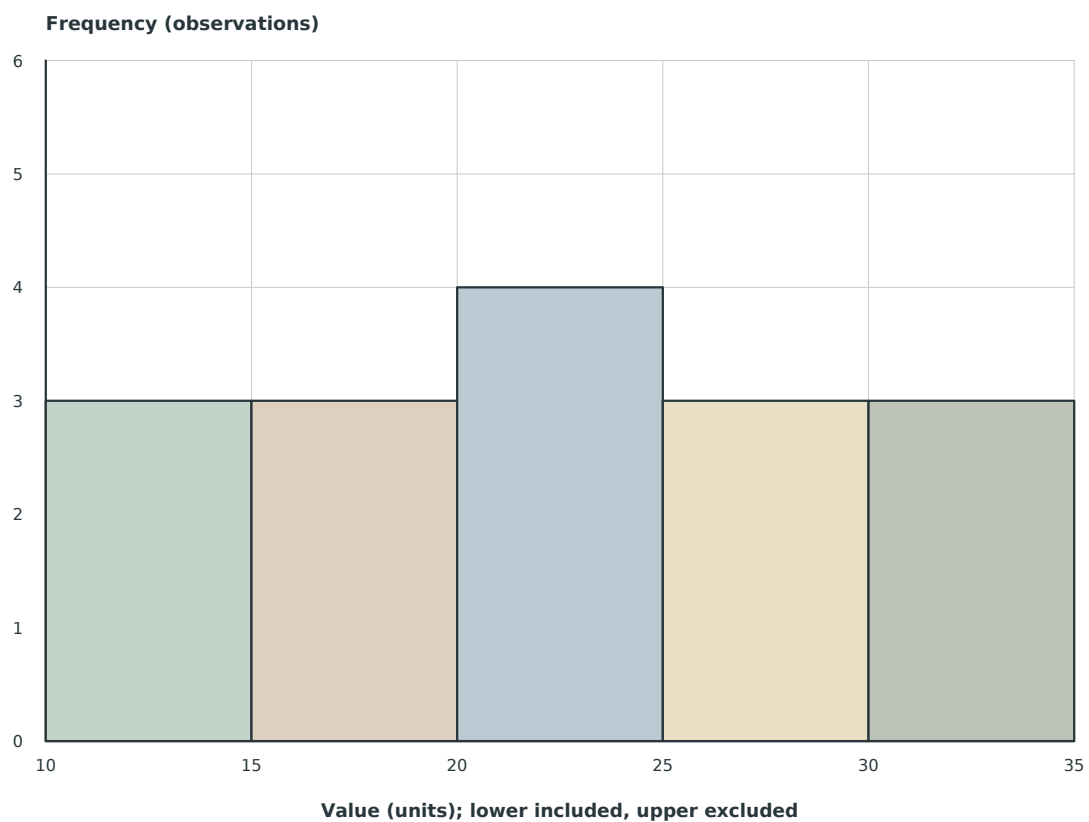


1. List bin frequencies from left to right. 2, 3, 4, 0, 3.
2. Check the total frequency. Total 12; all 12 observations counted once.
3. Where does the first internal boundary go? 2 belongs to $[2,4)$, not the first bin.

Bins beginning above zero

Fictional numerical data. Each bin includes its lower edge and excludes its upper edge: $[a,b)$. Equal-width bars touch.

Values: 10, 11, 14, 15, 17, 19, 20, 20, 22, 24, 25, 27, 29, 30, 32, 34 / bin edges: 10, 15, 20, 25, 30, 35

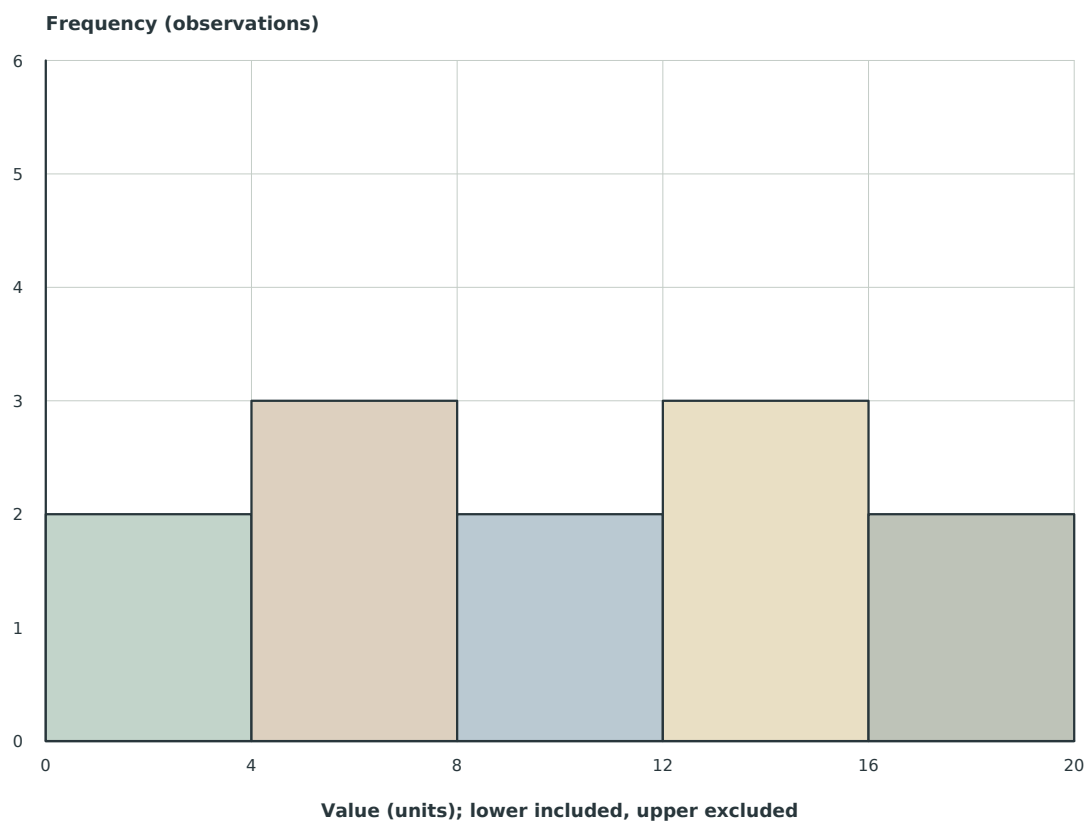


1. List bin frequencies from left to right. 3, 3, 4, 3, 3.
2. Check the total frequency. Total 16; all 16 observations counted once.
3. Where does the first internal boundary go? 15 belongs to $[15,20)$, not the first bin.

Repeated boundary values

Fictional numerical data. Each bin includes its lower edge and excludes its upper edge: $[a,b)$. Equal-width bars touch.

Values: 0, 0, 4, 4, 4, 8, 8, 12, 12, 12, 16, 19 / bin edges: 0, 4, 8, 12, 16, 20



1. List bin frequencies from left to right. 2, 3, 2, 3, 2.
2. Check the total frequency. Total 12; all 12 observations counted once.
3. Where does the first internal boundary go? 4 belongs to $[4,8)$, not the first bin.