

1. no.

observations in asc. order are

0, 1, 1, 2, 2, 3, 3, 3, 4, 5, 6, 7, 7, 8, 9, 10, 11, 12, 12

 $N = 19$ (odd)

$$\begin{aligned} \text{Middlemost observation} &= \frac{N+1}{2} \\ &= \frac{20}{2} \\ &= 10^{\text{th}} \end{aligned}$$

Median = 5

C I	frequency	cf
0 - 3	5	5
3 - 6	5	10
6 - 9	4	14
9 - 12	5	19
total	19	

$$\frac{N}{2} = \frac{19}{2} = 9.5, \quad \text{Median class } 3-6$$

$$l = 3, \quad h = 3$$

$$\begin{aligned} \text{Median} &= l + \frac{\frac{N}{2} - cf}{f} \times h \\ &= 3 + \frac{9.5 - 5}{5} \times 3 \\ &= 3 + \frac{4.5}{5} \times 3 \\ &= 3 + 2.5 \\ &= 5.5 \end{aligned}$$