~ Definition :

The Support of a function is the set of values, where it is non-zero (of the domain)

Example 1.6.30

Suppose the sample is

$$\{2, 4, 6, 8, 10, 12, 14, 16, 18\}$$

1   2   3   4   5   6   7   8   9

median

$$\frac{9+1}{2} = 5$$

lower quartile

2   4   6   8   10 $\frac{5+1}{2} = 3$

1   2   3   4   5

lower quartile
= median of lower sample

upper quartile

upper quartile   10   12   14   16   18 $\frac{5+1}{2} = 3$

1   2   3   4   5

$$IQR = upper\ q. - lower\ q.$$
$$= 14 - 6 = 8$$

Example $\qquad$ (median)

$$2 \quad 4 \quad \underline{6} \uparrow \underline{8} \quad 10 \quad 12 \text{ -- } -$$

lower
quartile

$$q_{0.25} = \frac{6+8}{2} = 7$$