89, 50, 49, 11, 44, 98, 45, 57, 5, 65, 62, 57 ①

a) 5 / 11 / 44 / 45 / 49 / 50 | 57 / 57 / 62 | 65 | 89 | 98

$\underset{\text{min}}{5}$ / 11 / 44 / $\underset{Q_1}{45}$ / 49 / 50 | $\underset{\text{median}}{57}$ / 57 / 62 | $\underset{Q_3}{65}$ | 89 | $\underset{\text{max}}{98}$

$\text{median} = 53.5 \left(\frac{50+57}{2}\right)$ | $\text{min} = 5$ | $\text{max} = 98$

$Q_1 = 44.5$ | $Q_3 = 63.5$
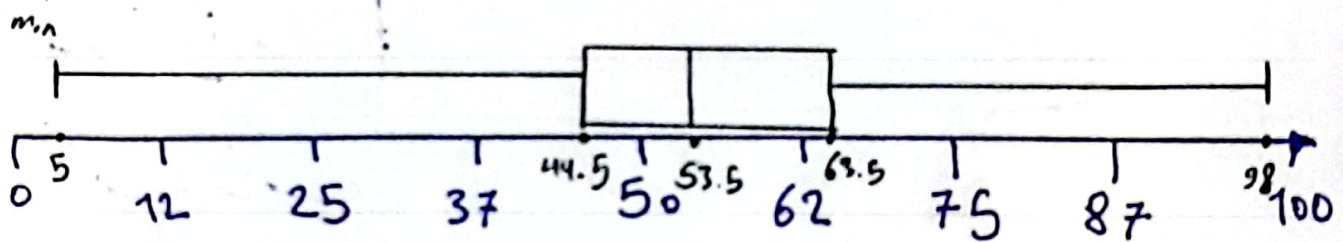
$IQR = Q_3 - Q_1 = 19$

Lower bound : $Q_1 - 1.5 \, IQR = 44.5 - 28.5$
$= 16$

upper bound : $(Q_3 + 1.5 \times IQR) = 63.5 + 28.5$
$= 92$

outliers : data Points ≥ 92 : 98 (1)

data Points ≤ 16 : 5, 11 (2)

mean : 52.6 ; median : 53.5 $\qquad$ (13

mode : 57

mean < median < mode $\Longrightarrow$

$\downarrow$

negatively skewed

(2)

Asymmetric	Symmetric	
✓		سرعت اینترنت
✓		قیمت مناسب
✓		خوش حسابی
✓		تنوع بسته ها

B

$d(A,B) = \dfrac{3}{4}$

: B, A

A \ B	1	0
1	1	1
0	2	0

$$d(A,C) = \frac{1}{2}$$

	A		
C	1	1	0
	1	1	0
	0	1	2

: A,C

$$d(B,C) = \frac{4}{4}$$

	B		
C	1	1	0
	1	0	1
	0	3	0

: B,C

$$Sim(B,C) < Sim(A,B) < Sim(A,C)$$