Question

Two random variables (A and B) are both approximately normal (bell-shaped). Their means and standard deviations are shown in the table.

variable	mean	standard deviation
A	94.5	10
B	106	15

Let the *interval of typical measurements* be defined as within 1 SD from the mean (mean $\pm$ SD).

$$\text{interval of typical measurements} = (\text{mean} - \text{SD},\ \text{mean} + \text{SD})$$

For each variable, provide an interval of typical measurements. Notice that an interval requires two numbers: the bottom and the top.

Answerlist

- Determine the interval of typical measurements for A.
- Determine the interval of typical measurements for B.

Solution

Answerlist

- $$\begin{aligned}\text{interval of typical measurements for } A &= (\text{mean} - \text{SD},\ \text{mean} + \text{SD}) \\ &= (94.5 - 10,\ 94.5 + 10) \\ &= \boxed{(84.5,\ 104.5)}\end{aligned}$$
- $$\begin{aligned}\text{interval of typical measurements for } B &= (\text{mean} - \text{SD},\ \text{mean} + \text{SD}) \\ &= (106 - 15,\ 106 + 15) \\ &= \boxed{(91,\ 121)}\end{aligned}$$

Meta-information

extype: num exsolution: 10 exname: calc s