

Chapter 14 / Example 8

Confidence intervals

The sample below is taken from a population which can be modelled by a normal distribution. Find a 95% confidence interval for the population mean.

34.3	29.5	38.1	27.5	29.2	37.0
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Press **STAT** 1:Edit and press **ENTER**

Type the values in the first column.

Press **ENTER** or \uparrow after each number to move to the next cell.

NORMAL FLOAT AUTO REAL RADIAN MP					
L1	L2	L3	L4	L5	L6
34.3	-----	-----	-----	-----	-----
29.5					
38.1					
27.5					
29.2					
37					

L1(7)=

To find the 95% confidence interval press **[STAT]** and **[▶] [▶]** to access the TESTS menu.

Select 8:TInterval... and press **ENTER**.

Choose Input: Data

List: L_1

Freq: 1

C-Level: .95

Navigate down to Calculate and press **ENTER**.

NORMAL FLOAT AUTO REAL RADIAN MP

TInterval

Inpt: **Data** Stats

List: L1

Freq: 1

C-Level: .95

Calculate

The 95% confidence interval is (27.91, 37.29).

NORMAL FLOAT AUTO REAL RADIAN MP

Interval

(27.914, 37.286)

$\bar{x}=32.6$

$S_x=4.464974804$

$n=6$