Chapter 13 / **Example 9**

Normal distribution

If $X \sim N(10,4)$ find

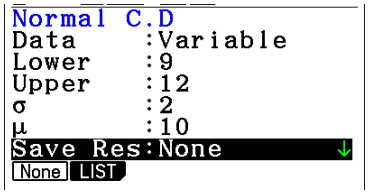
a $P(9 < X < 12)$ **b** $P(X < 13)$ **c** $P(X > 7)$

Press MENU 2 to display the List Editor screen.

Press F5 DIST F1 NORM F2 Ncd.

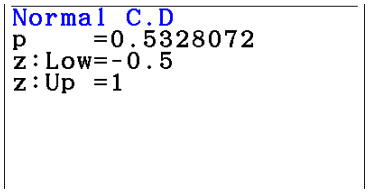
Select Data F2 Var.

Enter 9 as the value of Lower, 12 as the value of Upper, 2 as the value of σ, 10 as the value of μ and the other items unchanged.



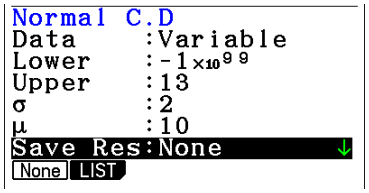
Use ▼ to navigate down to Execute and press EXE.

$P(9 < X < 12) = 0.533$.



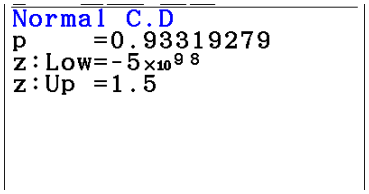
Press EXIT to display the Normal CD template.

Enter -1×10^{99} as the value of Lower using ×10ˣ, 13 as the value of Upper, leave 2 as the value of σ, 10 as the value of μ and the other items unchanged.



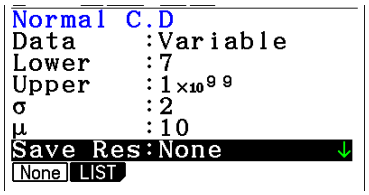
Use ▼ to navigate down to Execute and press EXE.

$P(X < 13) = 0.933$.



Press EXIT to display the Normal CD template.

Enter 7 as the value of Lower, 1×10^{99} as the value of Upper using ×10ˣ, leave 2 as the value of σ, 10 as the value of μ and the other items unchanged.



Use ▼ to navigate down to Execute and press EXE.

$P(X > 7) = 0.933$.