## [Translation of Graph of Quadratic Function]

\* Observe that the graph of ' $y = a (x - b)^2 + c$  ' is a translation of the graph of ' $y = a x^2$  ' by +b in the x-axis direction and +c in the y-axis direction.





[Emulator image] Android Studio Version 3.5.1

[Outline]

Let's observe that the graph of ' $y = a (x - b)^2 + c$  ' is a translation of the graph of ' $y = a x^2$  ' by +b in the x-axis direction and +c in the y-axis direction.

First , enter integers in a  $\ \ \, b$   $\ \ \, and \ \ \, c \ \ to$  determine the quadrafic function ' y=a ( x-b )  $^2+c$  ' .

Translate the graph of 'y = a x<sup>2</sup>' by +b in the x-axis direction and +c in the y-axis direction, and observe how it overlaps with the graph of 'y = a  $(x - b)^2 + c'$ .

Let's note that these two graphs have the same shape and spread, but differ only in the position.