1.3 Transformations of Non-Parent functions

Essential Question:

Example 1: Let \( f(x) = |4x| - 9 \)

A) Write a function \( g \) whose graph is a translation 5 units up of the graph of \( f \).

B) Write a function \( h \) whose graph is a translation 1 unit to the right of the graph of \( f \).

Example 2: Let \( f(x) = |x - 5| - 4 \).

A) Write a function \( h \) whose graph is a reflection in the x-axis of the graph of \( f \).

B) Write a function \( g \) whose graph is a reflection in the y-axis of the graph of \( f \).

Example 3: Let \( f(x) = |x - 1| + 2 \)

A) Write a function \( g \) whose graph is a horizontal stretch of the graph of \( f \) by a factor of 5.

B) Write a function \( h \) whose graph is a vertical shrink of the graph of \( f \) by a factor of 0.25.