Consider the recursively defined function \( f(x) = \begin{cases} x - 10 & \text{if } x > 100 \\ f(f(x + 11)) & \text{if } x \leq 100 \end{cases} \).

a) Find the values of \( f(92) \), \( f(85) \), \( f(92.5) \) and \( f(30\pi) \).

b) Compute several more values of \( f(x) \) for both integer and non-integer values of \( x \). Once you are satisfied that you understand how the function works, sketch an anatomically correct graph on the domain of \([90, 110]\). Explain why the graph must look as you claim it does.

c) By appealing to your graph or otherwise, find \( f'(x) \) and clearly indicate the domain of the derivative.

d) Let \( g(x) = f(f(x)) \) and let \( h(x) = f(x - 10) \). Find a relationship between the two functions \( g \) and \( h \). Explain why you believe this is the correct relationship.

e) Let \( g(x) = f(f(x)) \). Find \( g'(x) \). Clearly indicate the domain of \( g'(x) \).

f) Find values of \( a \), \( b \), and \( c \) so that \( F(x) = \begin{cases} x - a & \text{if } x \geq b \\ F(F(x + c)) & \text{if } x < b \end{cases} \) has the graph shown below: