7. $f(x) = a - x$.

$$f(f(x)) = a - f(x)$$
$$= a - (a - x)$$
$$= x$$

$\therefore$ $\underline{f(f(x)) = x}$

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8. $\begin{cases} f(x) = 1 + 2x \\ g(x) = a + bx \end{cases}$

temos

$$(f \circ g)(x) = f(g(x)) = 1 + 2g(x)$$
$$= 1 + 2(a + bx)$$
$$= 1 + 2a + 2bx$$

temos também

$$(g \circ f)(x) = g(f(x)) = a + bf(x)$$
$$= a + b(1 + 2x)$$
$$= a + b + 2bx$$

Seja $\underbrace{(f \circ g)(x)}_{1 + 2a + 2bx} = \underbrace{(g \circ f)(x)}_{a + b + 2bx}$ $\therefore$ $\underline{a = b - 1}$

$\rightarrow$