Question 5: If $f(x) = (x-3)/(x+1)$

, then $f[f\{f(x)\}]$ equals _____.
Solution:

$f[f(x)] = f(x) - 3f(x) + 1$

$= (x-3)/(x+1) - 3(x-3)/(x+1) + 1$

$= (x-3-3x-3)/(2x-2)$

$= (x+3)/(1-x)$

$f(x) = (2, 4] - \{3\}$.

Now $f[f\{f(x)\}] = f([3+x]/[1-x])$