$A(x) = |f(x)| - |g(x)| + h(x) = \left|\frac{3}{2}x + \frac{3}{2}\right| + C_1 - \left|\frac{5}{2}x\right| + C_2 - x + C_3$

letting $C = C_1 + C_2 + C_3$ and with the knowledge that

$A(0) = 2$ we find C : $2 = \left|0 + \frac{3}{2}\right| + 0 + 0 + C$

$\rightarrow \quad 2 = \frac{3}{2} + C \quad \rightarrow \quad C = \frac{1}{2}$

thus, $A(x) = \left|\frac{3}{2}x + \frac{3}{2}\right| - \left|\frac{5}{2}x\right| - x + \frac{1}{2}$

where $f(x) = \frac{3}{2}x + \frac{3}{2}$ $\quad g(x) = \frac{5}{2}x$ and

$h(x) = \frac{1}{2} - x$