c) $\frac{1}{x^2-4} = \frac{A}{x+2} + \frac{B}{x-2} = \frac{(A+B)x+2(B-A)}{x^2-4} \Rightarrow$

$A+B=0,\ 2(B-A)=1 \Rightarrow B=\frac{1}{2}+A \Rightarrow A+\frac{1}{2}+A=0$

$\Rightarrow A=-\frac{1}{4},\ B=\frac{1}{4} \Rightarrow \int \frac{1}{x^2-4}dx =$

$-\frac{1}{4}\int \frac{1}{x+2}dx + \frac{1}{4}\int \frac{1}{x-2}dx = -\frac{1}{4}\ln|x+2| + \frac{1}{4}\ln|x-2|$

d) $\frac{3x+2}{x^2-10x+25} = \frac{3x+2}{(x-5)^2} = \frac{A}{x-5} + \frac{B}{(x-5)^2} =$

$\frac{Ax-5A+B}{(x-5)^2} \Rightarrow A=3,\ -5A+B=2 \Rightarrow B=17$

$\Rightarrow \int \frac{3x+2}{x^2-10x+25}dx = 3\int \frac{1}{x-5}dx + 17\int \frac{1}{(x-5)^2}dx =$

$\underline{\underline{3\ln|x-5| - 17(x-5)^{-1}}}$