$$
\text { (a) } \begin{aligned}
f(x) & =5 x^{4}+8 x^{3}+1 \\
\rightarrow F(x) & =1 x^{5}+2 x^{4}+x
\end{aligned}
$$

$$
\text { b) } \begin{aligned}
f(x) & =\frac{x^{6}+1}{x^{2}}=\frac{x^{6}}{x^{2}}+\frac{1}{x^{2}}=\left(x^{6} \cdot x^{-2}\right)+\left(1 \cdot x^{-2}\right) \\
& =x^{4}+x^{-2} \\
\rightarrow F(x) & =\frac{1}{5} x^{5}-x^{-1}
\end{aligned}
$$

