## Partial Fractions in Integration 2 - Edexcel Past Exam Questions

1. 

$$
\mathrm{f}(x)=\frac{1}{x(3 x-1)^{2}}=\frac{A}{x}+\frac{B}{(3 x-1)}+\frac{C}{(3 x-1)^{2}} .
$$

(a) Find the values of the constants $A, B$ and $C$.
(b) (i) Hence find $\int f(x) d x$.
(ii) Find $\int_{1}^{2} \mathrm{f}(x) \mathrm{d} x$, leaving your answer in the form $a+\ln b$, where a and $b$ are constants.
2. Given that $y>0$, find

$$
\begin{equation*}
\int \frac{3 y-4}{y(3 y+2)} \mathrm{d} y \tag{6}
\end{equation*}
$$

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