

PARTIAL FRACTIONS 2

Express in partial fractions

① a) $\frac{3x-2}{(x+2)(x-1)}$

b) $\frac{-5}{(2x+1)(x-2)}$

c) $\frac{x+1}{x(3x-1)}$

② a) $\frac{2x^2+3}{(x-1)^2(x+2)}$

b) $\frac{3x-1}{x^2(x+1)}$

③ a) $\frac{8x^2+x-5}{(2x-1)^2(x+2)}$ in partial fractions

b) Hence find

$$\int \frac{8x^2+x-5}{(2x-1)^2(x+2)} dx$$

④ If $f(x) = \frac{2x^2+4}{(x-2)^2(x+4)}$

a) Express $f(x)$ in partial fractions

b) Hence find $f'(0)$