

C4 Partial Fractions

P3 June 2004

1. (a) Express

$$\frac{14x^2 - 11x - 3}{(x+2)(2x-1)^2}$$

in terms of partial fractions.

[4]

(b) Find $\int \frac{14x^2 - 11x - 3}{(x+2)(2x-1)^2} dx$.

[3]

P3 June 2003

1. Express

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

in terms of partial fractions.

Hence find $\int \frac{3x^2 + 2x + 1}{(1+2x)(1+x)^2} dx$.

[7]

P3 June 2002

1. Express

$$f(x) = \frac{x^2 + 2x - 1}{(2+x)^2(1+x)}$$

in terms of partial fractions. Hence, or otherwise, find $f'(1)$.

[7]

P3 June 2001

1. (a) Express $\frac{1}{x^2(2x-1)}$ in terms of partial fractions.

[5]

(b) Find $\int \frac{1}{x^2(2x-1)} dx$.

[3]

C4 June 2005

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

[4]

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

[3]