

Q1 Express as partial fractions.

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

(b)  $\frac{5x+1}{2x^2+5x-3}$

(c)  $\frac{3x^2-9x-1}{(x-1)(x-2)(x-4)}$

Q2 Express as partial fractions.

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

(b)  $\frac{x^3-4x+5}{(x-2)(x+3)}$

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

(d)  $\frac{4x^2-3x-2}{(x+1)(x-1)^2}$

(e)  $\frac{4x-1}{x^2(x^2-4)}$

Q3 Express  $\frac{7}{2x^3-3x^2-8x+12}$  as partial fractions.

Q4\* Express  $\frac{x^3}{x^6-1}$  as partial fractions.

Q5\* Express as partial fractions

(a)  $\frac{2x+1}{(x+1)x^5}$

(b)  $\frac{(x+1)^2}{(x-1)^{10}}$