Algebraic division

Gold

Given that:

$$\frac{2x^4 + 3x^3 - 5x^2 + 6x + 1}{(x-1)^2(x+2)} \equiv Ax + B + \frac{C}{9(x-1)} + \frac{D}{9(x-1)^2} + \frac{E}{9(x+2)}$$

find the values of A, B, C, D and E.

Silver

Given that:

$$\frac{5x^2 - 3x + 2}{(x-3)(x+2)} \equiv A + \frac{B}{5(x-3)} + \frac{C}{5(x+2)}$$

find the values of A, B and C.

Bronze

Given that:

$$\frac{3}{(x-2)(x-3)} \equiv \frac{A}{(x-2)} + \frac{B}{(x-3)}$$

find the values of A and B.