Algebra

Given:

$x.(x-1).(x+2) = a.x^2 + b.x$

(1). The Solutions to the equation are

$X = 1$

$X = -1$

(2). Calculation a and b

(3). Substitute a and b, and calculate x

$X = 1$

$0 = a.1 + b.1 \quad \Rightarrow \quad a + b = 0$

$X = -1$

$-1.(-2).1 = a - b \quad \Rightarrow \quad a - b = 2$

$2a = 2, \quad a = 1$

$b = -1$

$x.(x-1).(x+2) = x^2 - x$

$(x^2 - x).(x + 2) - (x^2 - x) = 0$

$(x^2 - x)(x + 2 - 1) = 0$

$x^2 - x = 0 \qquad x+1 = 0$

$x.(x-1) = 0 \qquad x = -1$

$x = 0, \; x = 1$