

1. Descompón en factores irreducibles los siguiente polinomios:

(a) $16x^4 - 56x^3 + 25x^2 - 3x$

Sol: $x(x-3)(4x-1)^2$

(j) $x^3 - 10x^2 + 33x - 36$

Sol: $(x-4)(x-3)^2$

(b) $3x^5 - 29x^4 + 99x^3 - 147x^2 + 98x - 24$

Sol: $(x-4)(x-3)(x-1)^2(3x-2)$

(k) $9x^4 - 90x^3 + 263x^2 - 198x + 40$

Sol: $(x-5)(x-4)(3x-2)(3x-1)$

(c) $12x^4 - 143x^3 + 483x^2 - 352x + 60$

Sol: $(x-6)(x-5)(3x-2)(4x-1)$

(l) $x^2 - 9x + 18$

Sol: $(x-6)(x-3)$

(d) $x^3 - 12x^2 + 44x - 48$

Sol: $(x-6)(x-4)(x-2)$

(m) $x^2 - 6x + 5$

Sol: $(x-5)(x-1)$

(e) $x^3 - 6x^2 + 8x$

Sol: $x(x-4)(x-2)$

(n) $x^3 - 10x^2 + 24x$

Sol: $x(x-6)(x-4)$

(f) $4x^5 - 48x^4 + 189x^3 - 299x^2 + 180x - 36$

Sol: $(x-6)(x-3)(x-2)(2x-1)^2$

(ñ) $6x^4 - 49x^3 + 123x^2 - 98x + 24$

Sol: $(x-4)(x-3)(2x-1)(3x-2)$

(g) $3x^4 - 37x^3 + 135x^2 - 131x + 30$

Sol: $(x-6)(x-5)(x-1)(3x-1)$

(o) $x^2 - 2x$

Sol: $x(x-2)$

(h) $2x^4 - 21x^3 + 64x^2 - 63x + 18$

Sol: $(x-6)(x-3)(x-1)(2x-1)$

(p) $9x^4 - 78x^3 + 193x^2 - 104x + 16$

Sol: $(x-4)^2(3x-1)^2$

(i) $6x^4 - 53x^3 + 113x^2 - 68x + 12$

Sol: $(x-6)(x-2)(2x-1)(3x-1)$

(q) $x^2 - 5x + 6$

Sol: $(x-3)(x-2)$

2. Descompón en factores irreducibles los siguiente polinomios:

(a) $6x^5 - 67x^4 + 216x^3 - 188x^2 + 48x$

Sol: $x(x-6)(x-4)(2x-1)(3x-2)$

(b) $x^2 - 9x + 18$

Sol: $(x - 6)(x - 3)$

(c) $x^3 - 3x^2 + 2x$

Sol: $x(x - 2)(x - 1)$

(d) $x^3 - x^2$

Sol: $x^2(x - 1)$

(e) $x^2 - 3x$

Sol: $x(x - 3)$

(f) $x^3 - 7x^2 + 11x - 5$

Sol: $(x - 5)(x - 1)^2$

(g) $x^3 - x^2$

Sol: $x^2(x - 1)$

(h) $6x^4 - 31x^3 + 48x^2 - 29x + 6$

Sol: $(x - 3)(x - 1)(2x - 1)(3x - 2)$

(i) $3x^4 - 22x^3 + 25x^2 - 6x$

Sol: $x(x - 6)(x - 1)(3x - 1)$

(j) $x^2 - 7x + 6$

Sol: $(x - 6)(x - 1)$

(k) x^2

Sol: x^2

(l) $12x^5 - 47x^4 + 59x^3 - 28x^2 + 4x$

Sol: $x(x - 2)(x - 1)(3x - 2)(4x - 1)$