ЗАДАНИЕ: Полная задача на факторизацию многочленов

$SPACE = Z[x]; \quad MODT = [7, 11, 13, 17, 19]; MODT = (mo_i);$
$for(i = 1; i < 20; i = i + 1)\{n = 10; f = \mathbf{randomPolynom}(n,\ 100, 5); k = \mathbf{rem}(i, 5) + 1; mod_v = mo_k;$
$variant = i; \mathbf{print}(variant, mod_v, f); \}$
$out:$

$variant = 1$
$mod_v = 11$
$f = 19x^{10} + 10x^9 + 28x^8 + 11x^7 + 16x^6 + 22x^5 + 5x^4 + 20x^3 + 20x^2 + 25x + 24$
$variant = 2$
$mod_v = 13$
$f = 17x^{10} + 15x^9 + 10x^8 + 15x^7 + 2x^6 + 15x^5 + 2x^4 + 10x^3 + 25x^2 + 15x + 8$
$variant = 3$
$mod_v = 17$
$f = 28x^{10} + 11x^9 + 31x^7 + 17x^6 + 11x^5 + 13x^4 + 22x^3 + 25x^2 + 21x + 1$
$variant = 4$
$mod_v = 19$
$f = 27x^{10} + 18x^9 + 22x^8 + 13x^7 + 4x^6 + 3x^5 + 16x^4 + 25x^3 + 12x^2 + 9x + 30$
$variant = 5$
$mod_v = 7$
$f = 31x^{10} + 11x^9 + 26x^8 + 26x^7 + 18x^6 + 15x^5 + 7x^4 + 7x^3 + 30x^2 + 23x + 22$
$variant = 6$
$mod_v = 11$
$f = 19x^{10} + 7x^9 + 10x^8 + 29x^7 + 10x^6 + 24x^5 + 8x^4 + 23x^3 + 26x^2 + 23$
$variant = 7$
$mod_v = 13$
$f = 12x^{10} + 26x^9 + 12x^8 + 14x^7 + 31x^6 + 13x^5 + 28x^4 + 31x^3 + 30x^2 + 29x + 9$
$variant = 8$
$mod_v = 17$
$f = 2x^{10} + 12x^9 + 17x^8 + 21x^7 + 17x^6 + 26x^5 + 17x^4 + 25x^3 + 27x^2 + 7x + 20$
$variant = 9$
$mod_v = 19$
$f = 20x^{10} + 24x^9 + 3x^8 + 7x^7 + 23x^6 + 18x^5 + 27x^4 + 8x^3 + 5x^2 + 28x + 31$
$variant = 10$
$mod_v = 7$
$f = 30x^{10} + 5x^9 + 28x^8 + 24x^7 + 18x^6 + 14x^5 + 19x^4 + 5x^3 + 30x + 14$
$variant = 11$
$mod_v = 11$
$f = 24x^{10} + x^9 + 17x^7 + 4x^6 + 5x^5 + 7x^4 + 31x^2 + 26x + 15$
$variant = 12$
$mod_v = 13$
$f = 25x^{10} + 12x^9 + 31x^8 + 12x^7 + 28x^6 + 24x^5 + 24x^3 + 7x^2 + 16x + 12$
$variant = 13$
$mod_v = 17$
$f = 21x^{10} + 30x^9 + 9x^8 + 20x^7 + 9x^6 + x^5 + 19x^4 + 27x^2 + x + 5$
$variant = 14$
$mod_v = 19$
$f = 20x^{10} + 25x^9 + 15x^8 + x^7 + 27x^6 + 8x^4 + 5x^3 + 10x^2 + 22x + 25$
$variant = 15$
$mod_v = 7$

$f = 16x^{10} + 11x^9 + 23x^8 + 2x^6 + 26x^5 + 21x^4 + 28x^3 + 4x^2 + 31x + 3$

$variant = 16$

$mod_v = 11$

$f = 5x^{10} + 21x^9 + 24x^8 + 7x^7 + 14x^6 + x^5 + 27x^4 + 28x^3 + 16x^2 + 15x + 27$

$variant = 17$

$mod_v = 13$

$f = 28x^{10} + 18x^9 + 18x^8 + 28x^7 + 19x^6 + 29x^5 + 27x^4 + 9x^3 + 9x^2 + 8x + 1$

$variant = 18$

$mod_v = 17$

$f = 2x^{10} + 9x^9 + 10x^8 + 30x^7 + 13x^6 + 19x^5 + 6x^4 + 19x^3 + 28x^2 + 27x + 15$

$variant = 19$

$mod_v = 19$

$f = 3x^{10} + 19x^9 + 9x^8 + 12x^7 + 22x^6 + 18x^5 + x^4 + 4x^3 + 2x^2 + 4x + 27$
