$y = (x-3)^2(x+4)$	$y = x^3 - 2x^2 - 15x + 36$	*x* intercept at (-4, 0) touches *x* axis at (3, 0)
$y = 3(x-3)(x+4)(x+1)$	$y = 3x^3 + 6x^2 - 33x - 36$	*x* intercepts at (3,0), (-4, 0), (-1, 0)
$y = (x-1)(x+4)(x+3)$	$y = x^3 + 6x^2 + 5x - 12$	*x* intercepts at (1, 0), (-3, 0), (-4, 0)
$y = x(x-4)^2$	$y = x^3 - 8x^2 + 16x$	*x* intercept at (0, 0) touches *x* axis at (4, 0)
$y = (x-3)(4-x)(x+1)$	$y = -x^3 + 6x^2 - 5x - 12$	*x* intercepts at (3,0), (4, 0), (-1, 0)

$y = (x - 3)^3 + 4$	$y = x^3 - 9x^2 + 27x - 23$	**Point of inflection at (3,4)**
$y = -(x + 3)^3 - 4$	$y = -x^3 - 9x^2 - 27x - 31$	**Point of inflection at (-3,-4)**
$y = 3(x - 4)^3$	$y = 3x^3 - 36x^2 + 144x - 192$	**Point of inflection at (4,0)**
$y = (4 - x)^3$	$y = -x^3 + 12x^2 - 48x + 64$	**Point of inflection at (4,0)**
$y = 4x^3$	$y = 4x^3$	**Point of inflection at (0,0)**
$y = (x - 4)^3$	$y = x^3 - 12x^2 + 48x - 64$	**Point of inflection at (4,0)**