Bellwork Alg 2 Monday, October 21, 2019

1. Is each a polynomial? If no, identify ALL parts that are the reason.

a) $f(x) = 12x^{\frac{3}{2}} - 6x^{-3} + 4x^2 + \frac{9}{x} + 6$

b) $y = -5.9x^5 + \frac{2}{7}x^3 - 0.285x + \sqrt{6}$

c) $y = 37x^6 + 2ix^4 - 9\sqrt{x} + 1$

2. Expand each. Give answer in Standard Form if there is only one variable.

a) $(2x - 9)^2$

b) $(x - 3)(x - 6)(x - 4)$

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ANSWERS

1. Is each a polynomial? If no, identify ALL parts that are the reason.

a) $f(x) = 12x^{\frac{3}{2}} - 6x^{-3} + 4x^2 + \frac{9}{x} + 6$

NOT a polynomial because not all exponents are whole #s & there is an x in a denominator.

b) $y = -5.9x^5 + \frac{2}{7}x^3 - 0.285x + \sqrt{6}$

THIS IS a polynomial. all exponents are whole numbers (5, 3, 1) and all coefficients are real #s ($-5.9, \frac{2}{7}, -0.285, \sqrt{6}$)

c) $y = 37x^6 + 2ix^4 - 9\sqrt{x} + 1$

NOT a polynomial.

There is a coefficient that is NOT a real number and a variable is under a radical.

2. Expand each. Give answer in Standard Form if there is only one variable.

a) $(2x-9)^2$

$(2x-9)(2x-9)$

	2x	−9
2x	$4x^2$	−18x
−9	−18x	+81

$4x^2 - 36x + 81$

b) $(x-3)(x-6)(x-4)$

$(x-3)(x-6)$

	x	−3
x	x^2	−3x
−6	−6x	+18

$= x^2 - 9x + 18$

$(x^2 - 9x + 18)(x-4)$

	x^2	−9x	+18
x	x^3	$-9x^2$	+18x
−4	$-4x^2$	+36x	−72

$x^3 - 13x^2 + 54x - 72$