Algebra 2   Bellwork   Monday, January 4, 2016

1. Find all Zeros and Maximums and Minimums (classify them as Absolute or Relative). $f(x) =$
$x^4 - 3x^3 - 3x^2 + 11x + 1$

Max: Min: Zeros:

Find all solutions, real and imaginary, by factoring.

2. $2x^5 - 72x = 0$ 3. $x^5 + 9x^3 - 36x = 0$

4. $x^3 - 2x^2 + 7x - 14 = 0$

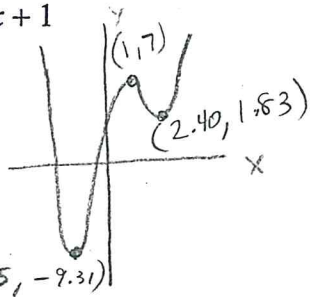# Algebra 2   Bellwork   Monday, January 4, 2016   【Answers】

1. Find all Zeros and Maximums and Minimums (classify them as Absolute or Relative). $f(x) =$
$x^4 - 3x^3 - 3x^2 + 11x + 1$

Max: Min: Zeros:

Rel: 7   Rel: 1.83 -1.82
Abs: NONE   Abs: -9.31
                                                                                 -0.09

Graph labels: $(1, 7)$, $(2.40, 1.83)$, $(-1.15, -9.31)$

Find all solutions, real and imaginary, by factoring.

2. $2x^5 - 72x = 0$ 3. $x^5 + 9x^3 - 36x = 0$
$2x(x^4 - 36) = 0$ $x(x^4 + 9x^2 - 36) = 0$
$2x(x^2 + 6)(x^2 - 6) = 0$ $x(x^2 - 3)(x^2 + 12) = 0$

$\boxed{X = 0, \pm\sqrt{6}, \pm i\sqrt{6}}$ $\boxed{X = 0, \pm\sqrt{3}, \pm 2i\sqrt{3}}$

4. $x^3 - 2x^2 + 7x - 14 = 0$
$(x^2 + 7)(x - 2) = 0$

$\boxed{X = 2, \pm i\sqrt{7}}$

	X	-2
x^2	x^3	$-2x^2$
$+7$	$+7x$	-14

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