Bellwork   Alg 2A   Friday, April 21, 2017

Find all real solutions to each polynomial equation by graphing. Round to the nearest hundredth where necessary.

1. $x^3 - 7x = 6 - 4x^2$

2. $0.01x^4 - 0.17x^3 + 0.06x^2 + 3.6x = 3$

3. Find all Complex solutions by factoring.

$-40x^4 + 3x^2 + 25x^5 = 2x^4 + 171x^2 - 72x^3 + 7x^5$

$X = -5.14, -0.65, 1.79$

$X = -4.35, 0.85, 5.38, 15.11$

$0 = -42x^4 - 72x^3 - 72x^2 + 72x^3$

$18x^5 - 42x^4 + 72x^3 - 168x^2 = 0$

$6x^2 (3x^3 - 7x^2 + 12x - 28) = 0$

$6x^2 (3x - 7)(x^2 + 4) = 0$

$x = 0 \qquad x = 7/3 \qquad x^2 + 4 = 0$

$\sqrt{x^2} = \sqrt{-4} \qquad x = \pm 2i$

	$3x$	-7
x^2	$3x^3$	$-7x^2$
$+4$	$+12x$	-28

$X = 0, \dfrac{7}{3}, \pm 2i$

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