1. Find all real zeros by graphing. Round to the nearest hundredth.

a) $y = 4x^3 - 14x^2 - 3x + 27$

b) $y = x^3 + 5x^2 + 3x - 9.1$

c) $y = -x^3 + 4x^2 - 0.1$
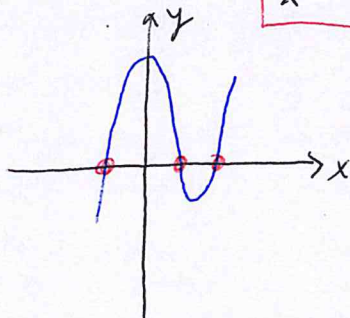
d) $y = -0.5x^3 + 0.5x^2 + 2.5x + 1.5$

3. Find all EXACT Complex zeros by factoring: $y = 4x^7 + 40x^5 - 384x^3$

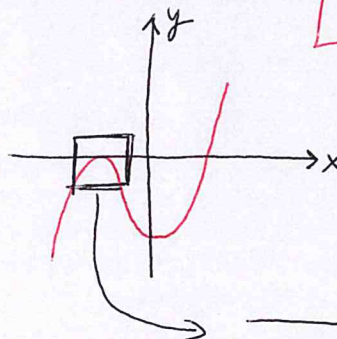1. Find all real zeros by graphing. Round to the nearest hundredth.
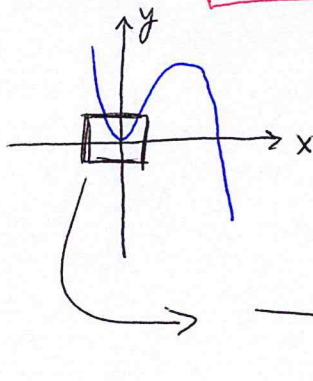
a) $y = 4x^3 - 14x^2 - 3x + 27$

$X = -1.27, 1.77, 3$

b) $y = x^3 + 5x^2 + 3x - 9.1$

$X = 1.01$
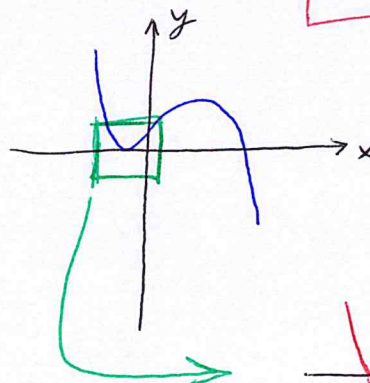
DOESN'T TOUCH
THE X-aNS

c) $y = -x^3 + 4x^2 - 0.1$

$X = -0.16, 0.16, 3.99$

d) $y = -0.5x^3 + 0.5x^2 + 2.5x + 1.5$

$X = -1, 3$

VERTEX IS
ON THE
X-AXIS

3. Find all EXACT Complex zeros by factoring: $y = 4x^7 + 40x^5 - 384x^3$

$0 = 4x^7 + 40x^5 - 384x^3$

$4x^3 (x^4 + 10x^2 - 96) = 4x^3 (x^2 + 16)(x^2 - 6)$

-96
+16 ✕ -6
+10

$x^2 + 16 = 0$ $x^2 - 6 = 0$

$\sqrt{x^2} = \sqrt{-16}$ $\sqrt{x^2} = \sqrt{6}$

$x = \pm 4i$ $x = \pm \sqrt{6}$

$X = 0, \pm 4i, \pm \sqrt{6}$

zero is a triple zero

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