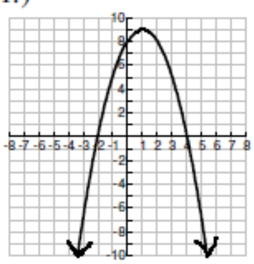
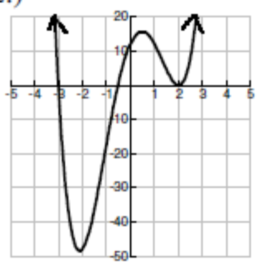
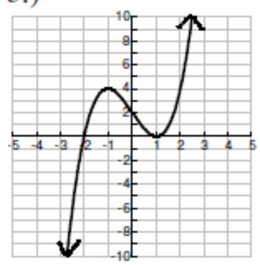
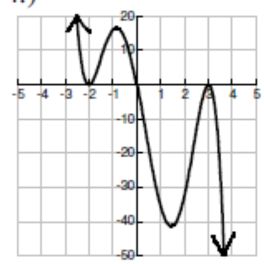
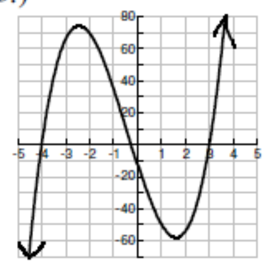
Unit 3 Day 2 CW(3)

– For Part 1, assume there is no multiplicity higher than 2. You may want to show work for problems 6-11 on a separate sheet.

I. For each given polynomial function P (x), determine the degree and the graph's end behavior.

1.)	2.)	3.)	4.)	5.)
				
Degree = ________	Degree = ________	Degree = ________	Degree = ________	Degree = ________
$x \to -\infty$, $y \to$ ____	$x \to -\infty$, $y \to$ ____	$x \to -\infty$, $y \to$ ____	$x \to -\infty$, $y \to$ ____	$x \to -\infty$, $y \to$ ____
$x \to \infty$, $y \to$ ____	$x \to \infty$, $y \to$ ____	$x \to \infty$, $y \to$ ____	$x \to \infty$, $y \to$ ____	$x \to \infty$, $y \to$ ____

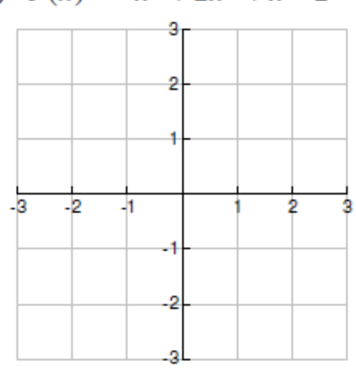
II. Find the polynomial P (x) with the given zeros (z). [redacted] (Factored Form)

6.) zeros = – 5 , 4	7.) zeros = ⅓ , – ½ , 0	8.) zeros = – 6 , 3 (mo2)
9.) zeros = – 1, 2 , ¾ (mo2)	10.) zeros = – 4 (mo2) , – 3 (mo2)	11.) zeros = – ⅔ (mo2) , ¼ , 0 (mo2)

(USE CALCULATOR)

III. Complete the blank information about polynomial P (x), then graph each the polynomial.

12.) $P(x) = -x^3 + 2x^2 + x - 2$



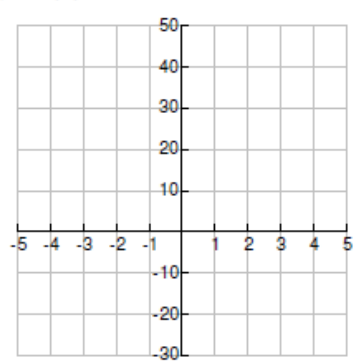
zeros: ________ [redacted]

[redacted] y-int: ______

End Behavior: $x \to -\infty$, $y \to$ _____

$x \to \infty$, $y \to$ _____

13.) $P(x) = -2x^4 - x^3 + 17x^2 + 16x - 12$



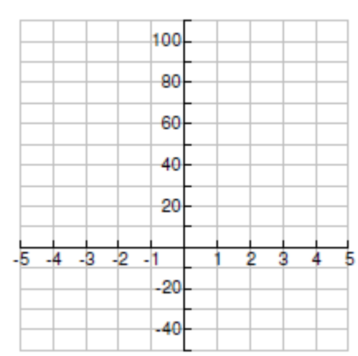
zeros: ________ [redacted]

[redacted] y-int: ______

End Behavior: $x \to -\infty$, $y \to$ _____

$x \to \infty$, $y \to$ _____

14.) $P(x) = 3x^5 - 14x^4 - x^3 + 60x^2 - 36x$



zeros: ________ [redacted]

[redacted] y-int: ______

End Behavior: $x \to -\infty$, $y \to$ _____

$x \to \infty$, $y \to$ _____