Name: Karol Hernandez Date: ____

QUIZ SELF-ASSESS

Q	__/5	Reason	T
1	5	I get end behaviours accurately. easy!	
2	5	Function notation is really easy, Yo comprendo!	
3	4	Same mistake for both. I know how to factor;	3
4	4	however, I always do things from memory & sometimes I isolate things & forget them	3
5	5	I get it, again end behaviors are super easy	
6	5	I know & understand synthetic division.	
7	4	I didn't read the directions although, I know the topic & understand it.	3

use diff color for corrections

did not finish factoring

27/35

YOUR TOTAL SCORE 32 /35

1. Which topics are you still struggling with?

Not really struggling, just more remembering things,

2. Which topics are you feeling comfortable with?

End behavior, factoring, & synthetic division

3. What will you do in the next week to increase your learning?

Probably do practice sheets I still have on factoring

Source: Esther Song, Niles West High School

Name: Key Period: ____ **Polynomials Quiz 2**

1. Sketch the end behavior for each polynomial

a) $10 - 5k + 10k^5$ ↓ ↑

b) $-10v^4 - 9v^5 + 6v^2$ ↓ ↓

2. Write the end behavior function notation for $-n^3 + 2n^2 + n^5$

As $x \to -\infty$, $f(x) \to +\infty$ as $x \to -\infty$, $f(x) \to -\infty$ ↑ ↓

3. Factor the function and find the x-intercepts for $y = 4x^5 - 36x^3$

$4x^3(x^2 - 9)$

$4x^3(x+3)(x-3)$

	−9
3	−3
0	

Factored Form: $4x^3(x+3)(x-3)$

x-intercepts: (0,0) (−3,0) (3,0)

4. Factor the function and find the x-intercepts for $y = x^3 - 5x^2 - 4x + 20$

$x^2(x-5) - 4(x-5)$

$(x-5)(x^2-4)$

$(x-5)(x+2)(x-2)$

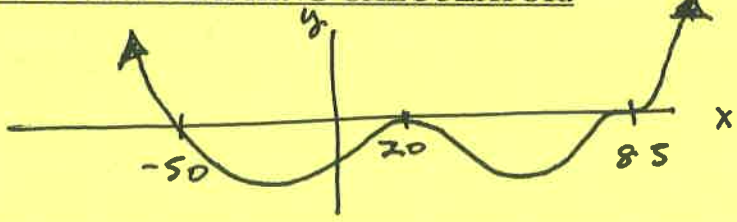
	−4
2	−2
0	

Factored Form: $(x-5)(x+2)(x-2)$

x-intercepts: (5,0) (−2,0) (2,0)

5. Using end behavior and the three types of x-intercepts, sketch $y = (x-20)^2(x+50)(x-85)^3$ **WITHOUT A GRAPHING CALCULATOR.**

bounce ↑ go thru ↑ swivel



6. Divide: $(r^3 - 15r^2 + 61r - 48) \div (r - 8)$

8	1	−15	61	−48
		8	−56	40
	1	−7	5	−8

$1r^2 - 7r + 5$ R −8

Solution: $r^2 - 7r + 5 + \frac{-8}{r-8}$

7. $(n^3 + 10n^2 + 17n + 8)$ **is evenly divisible by (n+8). Factor completely.**

−8	1	10	17	8
		−8	−16	−8
	1	2	1	0

$1n^2 + 2n + 1$

$(n+1)(n+1)(n+8)$

1	1
1/2	

$(n+1)^2(n+8)$

Factored form $(n+1)^2(n+8)$

Source: Esther Song, Niles West High School

Name: Kamil Czarnowski Period: ____ **Polynomials Quiz 2**

1. Sketch the end behavior for each polynomial

a) $10 - 5k + 10k^5$

b) $-10v^4 - 9v^5 + 6v^2$

2. Write the end behavior function notation for $-n^3 + 2n^2 + n^5$

As $x \to -\infty$, $f \to -\infty$ As $x \to \infty$, $f \to \infty$

3. Factor the function and find the x-intercepts for $y = 4x^5 - 36x^3$

$4x^3(x^2 - 9)$

Factored Form: $4x^3(x^2 - 9)$

x-intercepts: (3,0) (0,0) (-3,0)

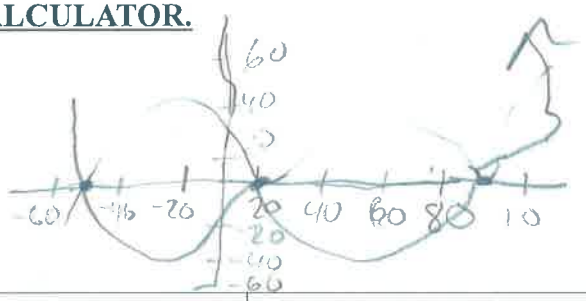
4. Factor the function and find the x-intercepts for $y = x^3 - 5x^2 - 4x + 20$

$x^2(x-5) - 4(x-5)$

Factored Form: $x^2(x-5) - 4(x-5)$

x-intercepts: (5,0) (2,0) (-2,0)

5. Using end behavior and the three types of x-intercepts, sketch $y = (x-20)^2(x+50)(x-85)^3$
WITHOUT A GRAPHING CALCULATOR.



6. Divide: $(r^3 - 15r^2 + 61r - 48) \div (r - 8)$

8 | 1 −15 61 −48
| 8 −56 40
1 −7 5 −8

$\frac{-8}{(r-8)}$

Solution: −8

7. $(n^3 + 10n^2 + 17n + 8)$ **is evenly divisible by (n+8). Factor completely.**

−8 | 1 10 17 8
| 1 −8 −16 −8
1 2 1 0

$n^2 + 2n + 1$ $-1 \cdot -2$

Factored form $n^2 + 2n + 1$

Source: Esther Song, Niles West High School

Source: Esther Song, Niles West High School

Name: natalie massih Date: ___

QUIZ SELF-ASSESS

Q	_/5	Reason	T
1	~~4~~ ~~3~~ ~~2~~ 5	I knew that 5 was odd and it was possitive so it ⊕ ↑↓ but I forgot about the ⊖10 and made it ↓↑ instead of ↑↓	
2	4	I think I am getting to understand it but not completely, so I don't think I deserve a 5.	
3	1 ~~2~~ ~~3~~	I forgot to take out the 4 and that is what confused me and I forgot about X.	
4	5	I fully understand it.	
5	2	I keep forgetting that you don't use the "x" for the axis you use the # given. But I understand the bounce ↘ straight ↓ and ~~start~~ ↗.	4 ~~3~~
6	3	I understand the concept but I must of my putting the 8 instead of a 1 which messed me up.	4
7	2	I forgot to factor completely	

Correct end behavior & x-int.

otherwise correct

YOUR TOTAL SCORE 21 /35

24/35

1. Which topics are you still struggling with?

2, 3, 5, 7

2. Which topics are you feeling comfortable with?

1, 4, 6

3. What will you do in the next week to increase your learning?

I need to look over ws and ask q's. I need extra ws for hw-

Source: Esther Song, Niles West High School

Name: Key Period: ____ **Polynomials Quiz 2**

1. Sketch the end behavior for each polynomial

a) $10 - 5k + 10k^5$

↓ ↑

b) $-10v^4 - 9v^5 + 6v^2$

↘ ↙

2. Write the end behavior function notation for $-n^3 + 2n^2 + n^5$

As $x \to -\infty$, $f(x) \to +\infty$

as $x \to -\infty$, $f(x) \to -\infty$ ↑ ↓

3. Factor the function and find the x-intercepts for $y = 4x^5 - 36x^3$

$4x^3(x^2 - 9)$

$4x^3(x+3)(x-3)$

−9 | 3 | −3 | 0

Factored Form: $4x^3(x+3)(x-3)$

x-intercepts: (0,0) (−3,0) (3,0)

4. Factor the function and find the x-intercepts for $y =$ $x^4 - 5x^3 - 4x + 20$

$x^3(x-5) - 4(x-5)$

$(x-5)(x^3-4)$

$(x-5)(x+2)(x-2)$

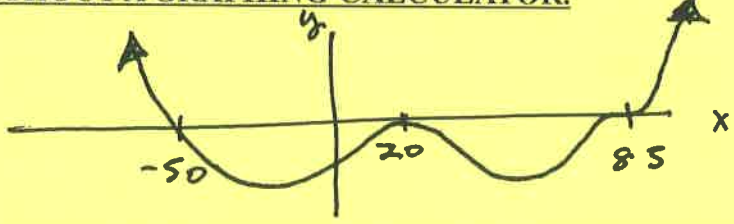
−4 | 2 | −2 | 0

Factored Form: $(x-5)(x+2)(x-2)$

x-intercepts: (5,0) (−2,0) (2,0)

5. Using end behavior and the three types of x-intercepts, sketch $y = (x-20)^2(x+50)(x-85)^3$
WITHOUT A GRAPHING CALCULATOR.

bounce ↑ go thru ↑ swivel



6. Divide: $(r^3 - 15r^2 + 61r - 48) \div (r - 8)$

8 | 1 −15 61 −48

8 −56 40

1 −7 5 | −8

$1r^2 - 7r + 5$ R −8

Solution: $r^2 - 7r + 5 + \frac{-8}{r-8}$

7. $(n^3 + 10n^2 + 17n + 8)$ **is evenly divisible by (n+8). Factor completely.**

−8 | 1 10 17 8

−8 −16 −8

1 2 1 | 0

$1n^2 + 2n + 1$

$(n+1)(n+1)(n+8)$

1 | 2 | 1

$(n+1)^2(n+8)$

Factored form $(n+1)^2(n+8)$

Source: Esther Song, Niles West High School

Name: Natalie massih Period: 7 **Polynomials Quiz 2**

1. Sketch the end behavior for each polynomial

a) $10 - 5k + 10k^6$

b) $-10v^4 - 9v^5 + 6v^2$

2. Write the end behavior function notation for $-n^3 + 2n^2 + n^5$

As $x \to -\infty$, $f(x) \Rightarrow +\infty$ as $x \to -\infty$, $f(x) \to -\infty$

3. Factor the function and find the x-intercepts for $y = 4x^5 - 36x^3$

$x^3(4x^2 - 36)$

$4x^3(x^2 - 9)$

$4x^3(x+3)(x-3)$

Factored Form: $4x^3(x+3)(x-3)$

x-intercepts: $0,0 \quad -3,0 \quad 3,0$

4. Factor the function and find the x-intercepts for $y = x^3 - 5x^2 - 4x + 20$

$x^2(x-5) - 4(x-5)$

$(x^2 - 4)(x-5)$

$5,0$

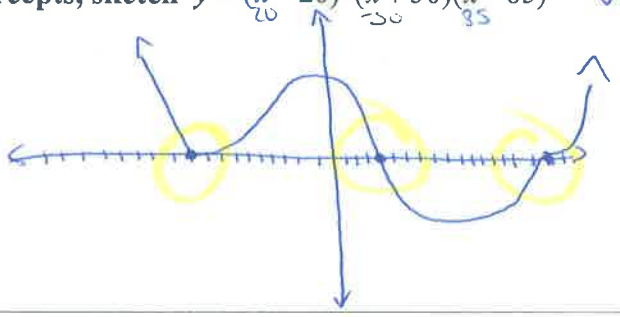
$(x+2)(x-2)$

$x^2 - 2x + 2x - 4$

Factored Form: $(x^2 - 4)(x-5)$

x-intercepts: $(5,0) \quad (-2,0) \quad (2,0)$

5. Using end behavior and the three types of x-intercepts, sketch $y = (x-20)^2(x+50)(x-85)^3$ **WITHOUT A GRAPHING CALCULATOR.**



6. Divide: $(r^3 - 15r^2 + 61r - 48) \div (r-8)$

$8 \mid 1 \quad -15 \quad 61 \quad -48$

$\downarrow \quad 8 \quad -56 \quad 40$

$1 \quad -7 \quad 5 \quad -8$

Solution: $8x^2 + 49x + 453 \frac{3576}{(r-8)}$

7. $(n^3 + 10n^2 + 17n + 8)$ **is evenly divisible by (n+8). Factor completely.**

$-8 \mid 1 \quad 10 \quad 17 \quad 8$

$\downarrow \quad -8 \quad -16 \quad -8$

$1 \quad 2 \quad 1 \quad 0$

Factored form $x^2 + 2x + 1$

Source: Esther Song, Niles West High School

Source: Esther Song, Niles West High School

Name: John mucci Date: ____

QUIZ SELF-ASSESS

Q	__/5	Reason	T
1	5/5	I understood the end behavior of each degree	
2	5/5	I wrote the function notation correctly	
3	5/5	I understood how to fide each form	
4	4/5	I knew how to do it But I made the wrong calculation	3
5	5/5	I understood how to compare the Polynomial how it relates to the graph	2
6	4/5	I knew how to do the Problem But I did not Put it in to the right form	3
7	2/5	I knew the first step But I could not finish it	

did not properly factor x^2-4

correct x-int incorrect behaviors

incorrect polynomial answer r^2-7r+5

25/35

YOUR TOTAL SCORE 30 /35

1. Which topics are you still struggling with?

how to factor after dividing Polynomials

2. Which topics are you feeling comfortable with?

all but factoring divided Polynomials

3. What will you do in the next week to increase your learning?

Practice what I must work on.

Name: Key Period: ____ **Polynomials Quiz 2**

1. Sketch the end behavior for each polynomial

a) $10 - 5k + 10k^5$ ↓ ↑

b) $-10v^4 - 9v^5 + 6v^2$ ↓ ↓

2. Write the end behavior function notation for $-n^3 + 2n^2 + n^5$

As $x \to -\infty$, $f(x) \to +\infty$ as $x \to -\infty$, $f(x) \to -\infty$ ↑ ↓

3. Factor the function and find the x-intercepts for $y = 4x^5 - 36x^3$

$4x^3(x^2 - 9)$

$4x^3(x+3)(x-3)$

3 | -9 | 0 | -3

Factored Form: $4x^3(x+3)(x-3)$

x-intercepts: (0,0) (-3,0) (3,0)

4. Factor the function and find the x-intercepts for $y =$ $x^3 - 5x^2 - 4x + 20$

$x^2(x-5) - 4(x-5)$

$(x-5)(x^2-4)$

$(x-5)(x+2)(x-2)$

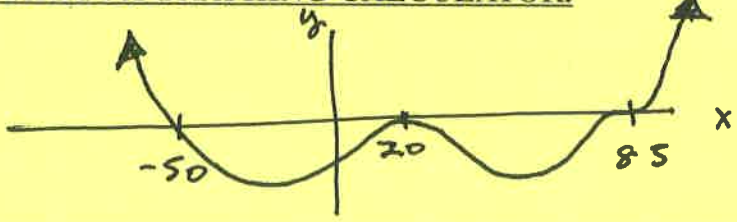
2 | -4 | 0 | -2

Factored Form: $(x-5)(x+2)(x-2)$

x-intercepts: (5,0) (-2,0) (2,0)

5. Using end behavior and the three types of x-intercepts, sketch $y = (x-20)^2(x+50)(x-85)^3$ **WITHOUT A GRAPHING CALCULATOR.**

bounce ↑ go thru ↑ swivel



6. Divide: $(r^3 - 15r^2 + 61r - 48) \div (r - 8)$

8 | 1 | -15 | 61 | -48

	8	-56	40
1	-7	5	-8

$1r^2 - 7r + 5$ $R\ -8$

Solution: $r^2 - 7r + 5 + \frac{-8}{r-8}$

7. $(n^3 + 10n^2 + 17n + 8)$ **is evenly divisible by (n+8). Factor completely.**

-8 | 1 | 10 | 17 | 8

	-8	-16	-8
1	2	1	0

$1n^2 + 2n + 1$

$(n+1)(n+1)(n+8)$

1 | 1 | -2 | 1

$(n+1)^2(n+8)$

Factored form $(n+1)^2(n+8)$

Source: Esther Song, Niles West High School

Name: John Pucci Period: 7 **Polynomials Quiz 2**

1. Sketch the end behavior for each polynomial

a) $10 - 5k + 10k^5$ ↓ ↑

b) $-10v^4 - 9v^5 + 6v^2$ ↑ ↓

2. Write the end behavior function notation for $-n^3 + 2n^2 + n^5$ ↓ ↑

As $x \to -\infty$, $f(x) \to -\infty$ $x \to \infty$ $f(x) \to \infty$

3. Factor the function and find the x-intercepts for $y = 4x^5 - 36x^3$

$4x^3(x^2 - 9)$

$x = -3$

$x = 3$

$x = 0$

Factored Form: $4x^3(x-3)(x+3)$

x-intercepts: $(0,0)\ (-3,0)\ (3,0)$

4. Factor the function and find the x-intercepts for $y = x^3 - 5x^2 - 4x + 20$

$x^2(x-5) - 4(x-5)$

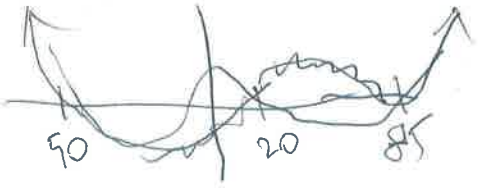
$(x^2-4)(x-5)$

$(x+4)(x-4)$

Factored Form: $(x-5)(x-4)(x+4)$

x-intercepts: $(5,0)\ (4,0)\ (-4,0)$

5. Using end behavior and the three types of x-intercepts, sketch $y = (x-20)^2(x+50)(x-85)^3$ **WITHOUT A GRAPHING CALCULATOR.**



↑ ↑

deg a = 6

6. Divide: $(r^3 - 15r^2 + 61r - 48) \div (r - 8)$

$8 \mid 1 \quad -15 \quad 61 \quad -48$

$\quad\quad\ \ 8 \quad -56 \quad 40$

$\quad 1 \quad -7 \quad 5 \quad 8$

$r^2 - 7r + 5r + 8$

Solution: $r^3 - 7r^2 + 5r + 8$

7. $(n^3 + 10n^2 + 17n + 8)$ **is evenly divisible by (n+8). Factor completely.**

$-8 \mid 1 \quad +10 \quad +17 \quad +8$

$\quad\quad\ \ -8 \quad -16 \quad -8$

$\quad 1 \quad 2 \quad 1 \quad 0$

$n^2 + 2n + 1$

$(n^2 + n) + (n + 1)$

$n(n+1)(n+1)$

Factored form $n(n+1)(n+1)$

Source: Esther Song, Niles West High School

Source: Esther Song, Niles West High School

Name: YARA BARBOSA Date: 2/12/13

QUIZ SELF-ASSESS

Q	__/5	Reason	T
1	5	I knew whether the end behaviors went up or down	
2	5	I knew what the end behavior was supposed to look like, and how to write a function	
3	5	I factored it completely and got it right	
4	3	I began right, but then I forgot to keep going	
5	~~3~~ 4	I forgot to add up the degrees	3
6	4.5	I did 5x8 wrong. silly mistake	4
7	0	I was confused on whether I could use the original way of dividing or not	

incorrect behavior at $x = 20$.

remainder written as $\frac{-8}{x-8}$

YOUR TOTAL SCORE 26.5 /35

25/35

1. Which topics are you still struggling with?

Factoring

2. Which topics are you feeling comfortable with?

dividing, end behaviors

3. What will you do in the next week to increase your learning?

practice problems, ask questions

Source: Esther Song, Niles West High School

Name: Key Period: ____ **Polynomials Quiz 2**

1. Sketch the end behavior for each polynomial

a) $10 - 5k + 10k^5$ ↓ ↑

b) $-10v^4 - 9v^5 + 6v^2$ ↙ ↓

2. Write the end behavior function notation for $-n^3 + 2n^2 + n^5$

As $x \to -\infty$, $f(x) \to +\infty$ as $x \to -\infty$, $f(x) \to -\infty$ ↑ ↓

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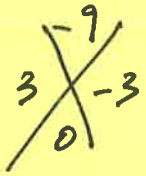

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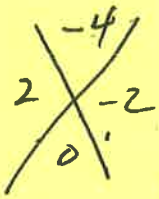
$x^2(x-5) - 4(x-5)$

$(x-5)(x^2-4)$

$(x-5)(x+2)(x-2)$



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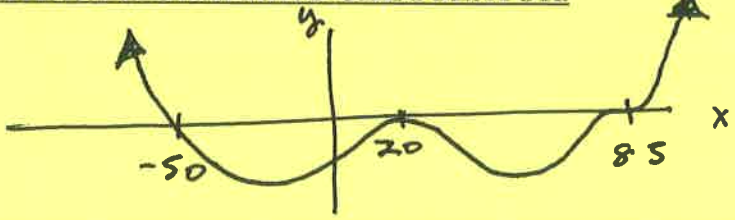
5. Using end behavior and the three types of x-intercepts, sketch $y = (x-20)^2(x+50)(x-85)^3$ **WITHOUT A GRAPHING CALCULATOR.**

bounce ↑ go thru ↑ swivel



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8	1	-15	61	-48
		8	-56	40
	1	-7	5	-8

$1r^2 - 7r + 5$ R -8

Solution: $r^2 - 7r + 5 + \frac{-8}{r-8}$

7. $(n^3 + 10n^2 + 17n + 8)$ **is evenly divisible by (n+8). Factor completely.**

-8	1	10	17	8
		-8	-16	-8
	1	2	1	0

$1n^2 + 2n + 1$

$(n+1)(n+1)(n+8)$

$(n+1)^2(n+8)$

Factored form $\boxed{(n+1)^2(n+8)}$

Source: Esther Song, Niles West High School

Name: YAKA BARBOSA Period: 7 **Polynomials Quiz 2**

1. Sketch the end behavior for each polynomial

a) $10 - 5k + 10k^5$

↓ ↑

b) $-10v^4 - 9v^5 + 6v^2$

↑ ↓

2. Write the end behavior function notation for $-n^3 + 2n^2 + n^5$

As $x \to -\infty$, $f(x) \to -\infty$ as $x \to +\infty$, $f(x) \to +\infty$

3. Factor the function and find the x-intercepts for $y = 4x^5 - 36x^3$

$4x^3(x^2 - 9)$

$4x^3(x-3)(x+3)$

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x-intercepts: $(3,0)\ (-3,0)\ (0,0)$

4. Factor the function and find the x-intercepts for $y = x^3 - 5x^2 - 4x + 20$

$x^2(x-5) - 4(x+5)$

$(x^2-4)(x-5)$

$(x-5)(x+2)(x-2)$

$(x-5)(x+2)(x-2)$

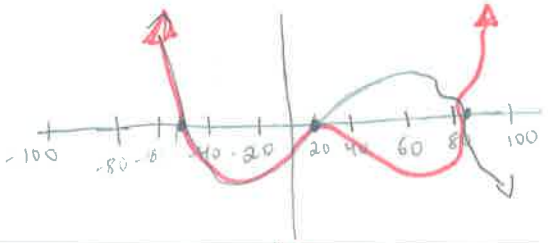
Factored Form: $x^2(x-5) - 4(x+5)$

x-intercepts: $(-2,0)\ (5,0)\ (2,0)$

5. Using end behavior and the three types of x-intercepts, sketch $y = (x-20)^2(x+50)(x-85)^3$ **WITHOUT A GRAPHING CALCULATOR.**

20 -50 85

DEGREE: 6



6. Divide: $(r^3 - 15r^2 + 61r - 48) \div (r - 8)$

$r - 8 \overline{)\ r^3 - 15r^2 + 61r - 48}$

$r^2 - 7r + 5$ R -3

$-r^3 - 8r^2$

$-7r^2 + 61r$

$-7r^2 + 56r$

$5r - 48$

$-5r - 40$

-8

Solution: $r^2 - 7r + 5$ R -8

7. $(n^3 + 10n^2 + 17n + 8)$ **is evenly divisible by (n+8). Factor completely.**

$1n^2 + 2n + 1$

$(n+1)(n+1)(n+8)$

$(n+1)^2(n+8)$

Factored form $(n+1)^2(n+8)$

Source: Esther Song, Niles West High School

Source: Esther Song, Niles West High School