

MATH 161 REALITY CHECK 13 NAME: _____

Copyright ©2009 by A. Schremmer under a GNU Free Documentation License.

[Run: 01/22/2016 at 21:58 Seed: 6477. Order of Checkable Items: List.]

Response Grid (Check the appropriate boxes thus:)

Question	a	b	c	d	e
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					

After having read the chapter pencil in hand and done this REALITY CHECK ,

i. What would you say the idea of the chapter is:

ii. What questions do you have:

-
-
-

MATH 161 REALITY CHECK 13 NAME: _____

Rck 13-1. Let f be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = -47.18x^3 + 30.67x^2 - 29.04x + 13.52$$

find its local input-output rule near ∞

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

- a. $+13.52 + [\dots]$
 b. $-47.18x^3 + 30.67x^2 - 29.04x + [\dots]$
 c. $-47.18x^3 + [\dots]$
 d. $+1 - 29.04x + [\dots]$
 e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-2. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = -45.97x^3 + 13.87x^2 - 24.36x + 16.73$$

what is Concavity-sign $f|_{\text{near } \infty}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. Concavity-sign $f|_{\text{near } \infty} = (\cup, \cup)$

b. Concavity-sign $f|_{\text{near } \infty} = (\cup, \cap)$

c. Concavity-sign $f|_{\text{near } \infty} = (\cap, \cup)$

d. Concavity-sign $f|_{\text{near } \infty} = (\cap, \cap)$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-3. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = -40.47x^3 + 53.84x^2 - 28.36x + 48.03$$

what is Slope-sign $f|_{\text{near } \infty}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. Slope-sign $f|_{\text{near } \infty} = (\swarrow, \swarrow)$

b. Slope-sign $f|_{\text{near } \infty} = (\swarrow, \searrow)$

c. Slope-sign $f|_{\text{near } \infty} = (\searrow, \swarrow)$

d. Slope-sign $f|_{\text{near } \infty} = (\searrow, \searrow)$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-4. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = -51.37x^3 + 32.57x^2 - 27.06x + 15.33$$

what is Height-sign $f|_{\text{near } \infty}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. Height-sign $f|_{\text{near } \infty} = (+, +)$

b. Height-sign $f|_{\text{near } \infty} = (+, -)$

c. Height-sign $f|_{\text{near } \infty} = (-, +)$

d. Height-sign $f|_{\text{near } \infty} = (-, -)$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-5. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = -4x^3 + 3x^2 - 2x + 1$$

find its local input-output rule for inputs near $x_0 = -5$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. $h \xrightarrow{f_{-5}} f_{-5}(h) = +586 - 332h + 63h^2 - 4h^3$

b. $h \xrightarrow{f_{-5}} f_{-5}(h) = -125 + 75h - 15h^2 + h^3$

c. $h \xrightarrow{f_{-5}} f_{-5}(h) = -104 + 66h - 14h^2 + h^3$

d. $h \xrightarrow{f_{-5}} f_{-5}(h) = 1 - 2h + 3h^2 - 4h^3$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Req 13-6. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = +2x^3 + 7x^2 - 16x - 5$$

What is Height-sign $f|_{\text{near } -5}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. Height-sign $f|_{\text{near } -5} = (+, +)$

b. Height-sign $f|_{\text{near } -5} = (+, -)$

c. Height-sign $f|_{\text{near } -5} = (-, +)$

d. Height-sign $f|_{\text{near } -5} = (-, -)$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-7. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = +2x^3 - 3x^2 - 72x - 18$$

What is Slope-sign $f|_{\text{near } +4}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. Slope-sign $f|_{\text{near } +4} = (\swarrow, \swarrow)$

b. Slope-sign $f|_{\text{near } +4} = (\swarrow, \searrow)$

c. Slope-sign $f|_{\text{near } +4} = (\searrow, \swarrow)$

d. Slope-sign $f|_{\text{near } +4} = (\searrow, \searrow)$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-8. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = +x^3 + 5x^2 - 8x + 7$$

What is Slope-sign $f|_{\text{near } -4}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. Slope-sign $f|_{\text{near } -4} = (\swarrow, \swarrow)$

b. Slope-sign $f|_{\text{near } -4} = (\swarrow, \searrow)$

c. Slope-sign $f|_{\text{near } -4} = (\searrow, \swarrow)$

d. Slope-sign $f|_{\text{near } -4} = (\searrow, \searrow)$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-9. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = -x^3 - 15x^2 + 3x - 10$$

What is Concavity-sign $f|_{\text{near } -5}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. Concavity-sign $f|_{\text{near } -5} = (\cup, \cup)$

b. Concavity-sign $f|_{\text{near } -5} = (\cup, \cap)$

c. Concavity-sign $f|_{\text{near } -5} = (\cap, \cup)$

d. Concavity-sign $f|_{\text{near } -5} = (\cap, \cap)$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-10. Let the function f be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = -2x^3 + 10x^2 + 3x - 10$$

What is Concavity-sign $f|_{\text{near } +2}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.

a. Concavity-sign $f|_{\text{near } +2} = (\cup, \cup)$

b. Concavity-sign $f|_{\text{near } +2} = (\cup, \cap)$

c. Concavity-sign $f|_{\text{near } +2} = (\cap, \cup)$

d. Concavity-sign $f|_{\text{near } +2} = (\cap, \cap)$

e. None of the preceding

iii. Check the corresponding box in the **Response Grid** on the front page thus: .

Rck 13-11. Let the function f be specified by the global input-output rule

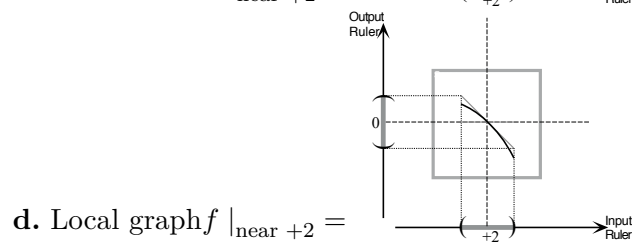
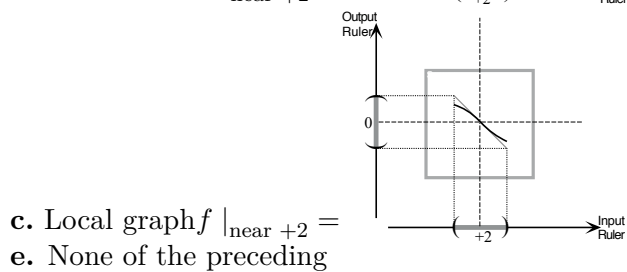
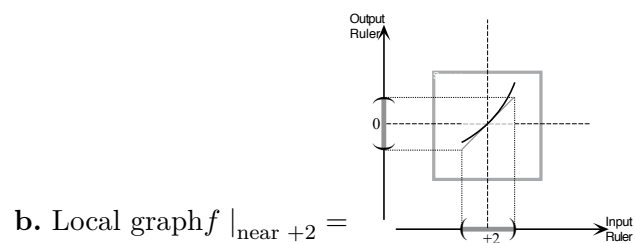
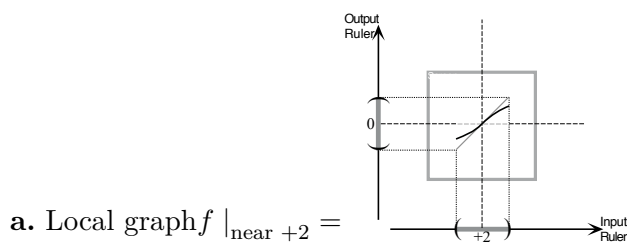
$$x \xrightarrow{f} f(x) = +2x^3 - 4x^2 - 2x + 4$$

What is Local graph $f|_{\text{near } +2}$

Your Work:

i. You must make your case for whatever statement you are making.

ii. Circle which of the following choices corresponds to your result.



iii. Check the corresponding box in the **Response Grid** on the front page thus: .