

MATH 161 REALITY CHECK 15 NAME: _____

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[Run: 01/22/2016 at 21:56 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 15 NAME: _____

Rck 15-1. Identify $(+13 + h)^2$ **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. $+169 + h^2$ b. $+169 + 13h + h^2$ c. $+169 + 26h + h^2$ d. $+13 + h + h^2$
e. None of the preceding

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

Rck 15-2. Identify the coefficient of the *constant term* of $(+11 + h)^2$ **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. 100 b. 11 c. 22 d. 121
e. None of the preceding

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

Rck **15-3.** Identify the coefficient of the *linear term* of $(+12 + h)^2$

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. $+12h$ b. $+12$ c. $+24h$ d. $+24$
e. None of the preceding

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

Rck **15-4.** Identify the coefficient of the *quadratic term* of $(+7 + h)^2$

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. $+h^2$ b. $+1$ c. $+7h^2$ d. $+14$
e. None of the preceding

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

Rck 15-5. Identify $(+7 + h)^3$

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. $+343 + h^3$ b. $+343 + 21h + h^3$ c. $+343 + 49h + 7h^2 + h^3$ d. $+343 + 147h + 21h^2 + h^3$
e. None of the preceding

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

Rck 15-6. Identify the coefficient of the *linear term* of $(-5 + h)^3$

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. -75 b. $+75$ c. $+25$ d. -25
e. None of the preceding

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

Rck 15-7. Identify the coefficient of the *quadratic term* of $(-5 + h)^3$

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. -75 b. +5 c. +15 d. -15
 e. None of the preceding

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

Rck 15-8. Given the function *MENIE* whose global input-output rule is

$$x \xrightarrow{MENIE} MENIE(x) = \frac{x^3 - 16}{x}$$

find the approximate local input-output rule of *MENIE* near ∞ for concavity-sign.

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. $x \xrightarrow{MENIE_\infty} MENIE_\infty(x) = +x^3 - 16 + [\dots]$

b. $x \xrightarrow{MENIE_\infty} MENIE_\infty(x) = +x^2 + [\dots]$

c. $x \xrightarrow{MENIE_\infty} MENIE_\infty(x) = +x^2 + \frac{16}{x} + [\dots]$

d. $x \xrightarrow{MENIE_\infty} MENIE_\infty(x) = +x^3 + [\dots]$

e. None of the preceding

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

Rck 15-9. Given the function f specified by the global input-output rule

$$x \xrightarrow{f} f(x) = \frac{-6x^2 - 3x + 8}{-2x^5 - 5x^4 + x^3}$$

find the approximate local input-output rule of f near ∞ for concavity-sign

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. $x \xrightarrow{f_\infty} f_\infty(x) = -3x^{-3} + [\dots]$

b. $x \xrightarrow{f_\infty} f_\infty(x) = +3x^{-3} + [\dots]$

c. $x \xrightarrow{f_\infty} f_\infty(x) = -\frac{1}{3}x^3 + [\dots]$

d. $x \xrightarrow{f_\infty} f_\infty(x) = +\frac{1}{3}x^3 + [\dots]$

e. None of the preceding

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

Rck 15-10. Given the function $NANA$ specified by the global input-output rule

$$x \xrightarrow{NANA} NANA(x) = \frac{x^2 - 4}{(x - 3)^2}$$

find the approximate local input-output rule of $NANA$ near ∞ for concavity-sign

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. $h \xrightarrow{NANA_\infty} NANA_\infty(h) = 1 + [\dots]$
 b. $h \xrightarrow{NANA_\infty} NANA_\infty(h) = 1 + 6x^{-1} + [\dots]$
 c. $h \xrightarrow{NANA_\infty} NANA_\infty(h) = 1 - 6x^{-1} + [\dots]$
 d. $h \xrightarrow{NANA_\infty} NANA_\infty(h) = 1 - 6x + [\dots]$

e. None of the preceding

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

Rck 15-11. Given the function f whose global input-output rule is

$$x \xrightarrow{f} f(x) = \frac{-3x^3 - 8x^2 - 8x - 13}{-3x^2 + x - 5}$$

find the approximate local input-output rule near ∞ for concavity-sign

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. $-x^2 + 3x + 2$ b. $x + 3 + 2x^{-1}$ c. $x + 3 - 2x^{-1}$ d. $x^2 - 3x + 2$
e. None of the preceding

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