

MATH 161 REALITY CHECK 12 NAME: \_\_\_\_\_

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[ Run: 01/22/2016 at 22:2 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					

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 12 NAME: \_\_\_\_\_

*Rck 12-1.* Let  $f$  be the function specified by the global input-output rule

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

for which input(s), if any, is the output of  $f$  equal to 0?

**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. -1                      b. +1                      c. -1, +1                      d. No such input  
e. None of the preceding

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

*Rck 12-2.* Let the function  $f$  be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = +6x^2 + 12x + 24$$

for which input(s), if any, is the output of  $f$  *positive*?

**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. All inputs                      b. All inputs larger than  $-1$   
 c. All inputs smaller than  $-1$                       d. No such input  
 e. None of the preceding

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

*Rck 12-3.* Let the function  $f$  be specified by the global input-output rule

$$x \xrightarrow{f} f(x) = +6x^2 + 12x + 16$$

for which input(s), if any, is Slope-sign  $f = (\searrow, \searrow)$ ?

**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. All inputs larger than  $-1$                       b. All inputs smaller than  $-1$   
 c. All inputs larger than  $+1$                       d. All inputs larger than  $0$   
 e. None of the preceding

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

*Rck 12-4.* Given the function  $f$  whose global input-output rule is

$$x \xrightarrow{f} f(x) = +3x^2 - 6x - 7$$

near which input(s), if any, is the output of  $f$  *decreasing*?

**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. All inputs smaller than  $-1$       b. All inputs larger than  $-1$   
 c. All inputs larger than  $+1$       d. No such input  
 e. None of the preceding

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

*Rck 12-5.* Let  $f$  be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = +63.12x^2 - 12.73x + 16.63$$

for which input(s), if any, is Concavity-sign  $f = (\cup, \cup)$ ?

**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.  $-14.22$       b. All inputs except  $-14.22$   
 c. All inputs larger than  $-10.5$       d. No such input  
 e. None of the preceding

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

*Rck* **12-6.** Let  $f$  be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = +32.44x^2 - 6.06x - 72.31$$

near which input(s), if any, is  $f$  *concave down*?

**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. All inputs smaller than  $-1$       b. All inputs smaller than  $+1$   
c. All inputs larger than  $-1$       d. No such input  
e. None of the preceding

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