

MATH 161 HOMEWORK 18 NAME: \_\_\_\_\_

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[ Run: 11/27/2011 at 19:15 Seed: 6477. Order of Checkable Items: List.]

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**Response Grid** (Mark the appropriate box thus: )

Question	a	b	c	d	e
1					
2					
3					
4					
5					
6					
7					

**18-1.** Given the function *MENIE* whose global input-output rule is

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

what is the answer to the ESSENTIAL QUESTION?

**Your Work:**

i. Explain your reasoning in getting your result.


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

- a. No  $\infty$ -height input.
- b. One  $\infty$ -height input: +1
- c. Two  $\infty$ -height inputs: -2 and +2
- d. Three  $\infty$ -height inputs: -2, 0 and +2.
- e. None of the preceding

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

**18-2.** Given the function *NANA* whose global input-output rule is

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

what is the answer to the ESSENTIAL QUESTION?

**Your Work:**

i. Explain your reasoning in getting your result.

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

- a. All bounded inputs have bounded-height outputs.
- b. The bounded input  $+3$  has  $\infty$ -height output.
- c. The bounded input  $-3$  has  $\infty$ -height output.
- d. The bounded inputs  $-3$  and  $+3$  have  $\infty$ -height outputs.
- e. None of the preceding

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

**18-3.** Given the function *MENIE* whose global input-output rule is

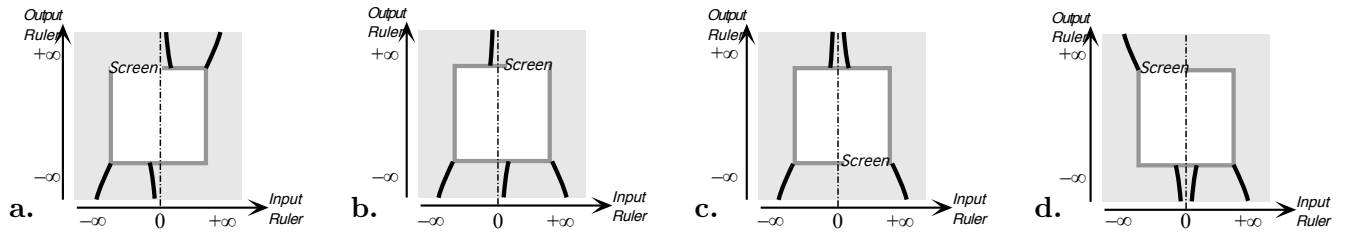
$$x \xrightarrow{MENIE} MENIE(x) = \frac{x^3 - 16}{x}$$

find the forcing graph of *MENIE*.

**Your Work:**

i. Explain your reasoning in getting your result.

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



e. None of the preceding

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

18-4. Given the function *JEAN* whose input-ouput global rule is

$$x \xrightarrow{JEAN} JEAN(x) = \frac{x}{x^3 + 8}$$

find the forcing graph of *JEAN*.

**Your Work:**

i. Explain your reasoning in getting your result.

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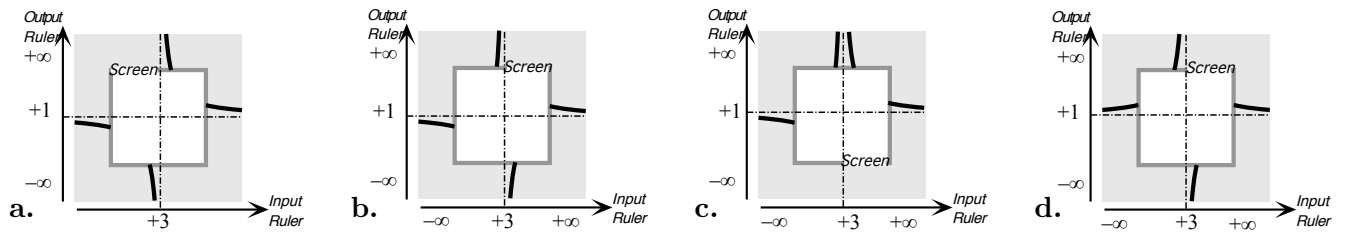


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ii. Circle which of the following choices corresponds to your result.



e. None of the preceding

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

18-5. Given the function *NANA* whose global input-output rule is

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

find the forcing graph of *NANA*.

**Your Work:**

i. Explain your reasoning in getting your result.

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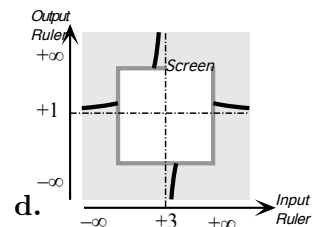
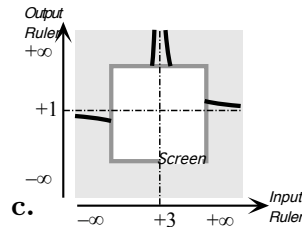
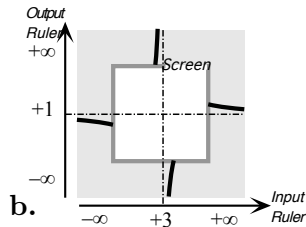
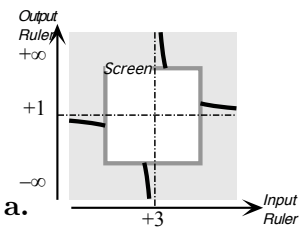


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ii. Circle which of the following choices corresponds to your result.



e. None of the preceding

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

18-6. Given the function *MENIE* whose global input-output rule is

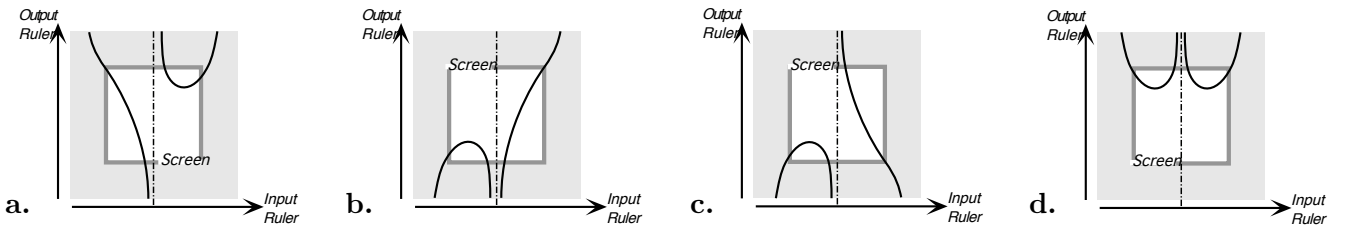
$$x \xrightarrow{MENIE} MENIE(x) = \frac{x^3 - 16}{x}$$

find the essential bounded graph of *MENIE*.

**Your Work:**

i. Explain your reasoning in getting your result.


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



e. None of the preceding

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

18-7. Given the function  $NANA$  whose global input-output rule is

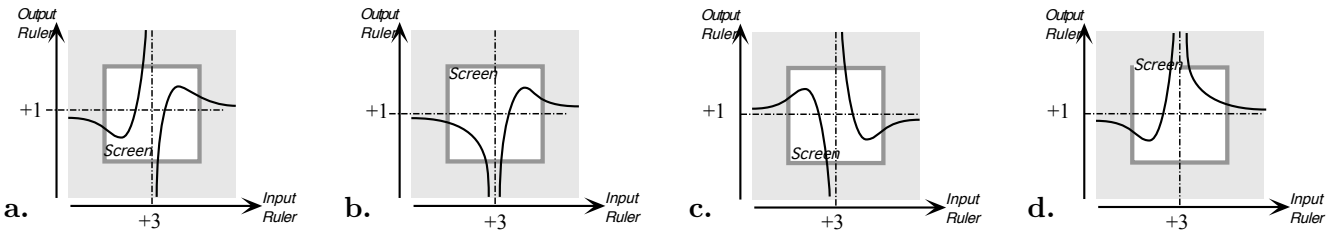
$$x \xrightarrow{NANA} NANA(x) = \frac{x^2 - 4}{(x - 3)^2}$$

find the essential bounded graph of  $NANA$ .

**Your Work:**

i. Explain your reasoning in getting your result.


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



e. None of the preceding

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