

## MATH 161 REVIEW III Questions

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[ Run: 11/04/2011 at 13:55 Seed: 2274. Order of Checkable Items: List.]

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**III-1.** Given the function *ROCCO* specified by the global input-output rule

$$x \xrightarrow{ROCCO} ROCCO(x) = \frac{x^2 + 4}{x^2 - 4}$$

find the approximate local input-output rule of *ROCCO* near  $\infty$  for concavity-sign.

**III-2.** Given the function *RILAH* specified by the global input-output rule

$$x \xrightarrow{RILAH} RILAH(x) = \frac{-4x + 1}{+12x^4 - x^3 + 6}$$

find the Height sign of *RILAH* near  $\infty$ .

**III-3.** Given the function *ROLLO* specified by the global input-output rule

$$x \xrightarrow{ROLLO} ROLLO(x) = \frac{x + 1}{x^3 - 1}$$

find Slope sign of *ROLLO* near  $\infty$ .

**III-4.** Given the function *REDUX* whose global input-ouput rule is

$$x \xrightarrow{REDUX} REDUX(x) = \frac{x - 1}{x^3 - 8}$$

find the local graph of *REDUX* near  $\infty$

**III-5.** Given the function *ROAR* specified by the global input-output rule

$$x \xrightarrow{ROAR} ROAR(x) = \frac{x^2 + 1}{x^2 - 1}$$

find the local graph of *ROAR* near  $\infty$ .

**III-6.** Given the function *RATON* specified by the global input-output rule

$$x \xrightarrow{RATON} RATON(x) = \frac{x - 1}{x^3 - 8}$$

find the approximate input-output local rule for graph near  $+2$

**III-7.** Given the function *RORY* specified by the global input-output rule

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

find the local graph of *RORY* near +2.

**III-8.** Given the function *RAMOS* specified by the global input-output rule

$$x \xrightarrow{RAMOS} RAMOS(x) = \frac{x^2 - 5}{(x - 1)^2}$$

find the Concavity-sign of *RAMOS* near +1.

**III-9.** Given the function *REILL* specified by the global input-output rule

$$x \xrightarrow{REILL} REILL(x) = \frac{x^3 - 10}{x^3 - 8}$$

find the Slope sign of *REILL* near +2.

**III-10.** Given the function *RURAL* specified by the global input-output rule

$$x \xrightarrow{RURAL} RURAL(x) = \frac{x^2 - 5}{(x - 1)^2}$$

find the Height sign of *RURAL* near +1.

**III-11.** Given the function *RADON* whose global input-ouput rule is

$$x \xrightarrow{RADON} RADON(x) = \frac{x - 1}{x^3 - 8}$$

find the approximate local input-output rule near +1 for graph

**III-12.** Given the function *REMY* specified by the global input-output rule

$$x \xrightarrow{REMY} REMY(x) = \frac{-x^2 + 9}{x^2 - 6}$$

find the local graph near +3.

**III-13.** Given the function *RAYON* whose global rule is

$$x \xrightarrow{RAYON} RAYON(x) = \frac{x - 15}{x^3 - 8}$$

find the approximate local input-output rule near +1 for graph

**III-14.** Given the function *RARA* specified by the global input-output rule

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

find the local graph of *RARA* near +1.

**III-15.** Given the function *RHEA* specified by the global input-output rule

$$x \xrightarrow{RHEA} RHEA(x) = \frac{(x - 2)(x - 1)}{x^2 - 9}$$

find the  $\infty$ -height inputs of *RHEA*.

**III-16.** Given the function *RHUMA* specified by the global input-output rule

$$x \xrightarrow{RHUMA} RHUMA(x) = \frac{(x - 2)(x - 1)}{x^2 - 9}$$

locate the 0-height input(s) if any.

**III-17.** Given the function *RETA* specified by the global input-output rule

$$x \xrightarrow{RETA} RETA(x) = \frac{x - 1}{x^3 - 8}$$

how many Concavity-sign change inputs does *RETA* have?

**III-18.** Given the function *RITA* specified by the global input-output rule

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

how many Slope-sign change inputs does *RITA* have?

**III-19.** Given the function *REBA* specified by the global input-output rule

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

how many Height-sign change inputs does *REBA* have?

**III-20.** Given the function *RHINO* specified by the global input-output rule

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

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