MATH 161 WORKOUT 13 NAME: _____

[Run: 11/14/2012 at 11:16. Order of Checkable Items: List.]

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

$$x \xrightarrow{f} f(x) = +26x^3 - 45.52x^2 - 179.54x - 15.82$$

Determine:

i. The local input-output rule of f near ∞

ii. The local graph of f near ∞

iii. The Height-sign of f near ∞

iv. The Slope-sign of f near ∞

v. The Concavity-sign of f near ∞

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

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

Determine:

i. The local input-output rule of f near -2

ii. The local graph of f near -2

iii. The Height-sign of f near -2

iv. The Slope-sign of f near -2

v. The Concavity-sign of f near -2

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

$$x \xrightarrow{f} f(x) = x^3 - 3x^2 - 9x + 7$$

Determine:

i. The local input-output rule of f near $+3$

ii. The local graph of f near $+3$

iii. The Height-sign of f near $+3$

iv. The Slope-sign of f near $+3$

v. The Concavity-sign of f near $+3$

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

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

Determine:

i. The local input-output rule of f near -2

ii. The local graph of f near -2

iii. The Height-sign of f near -2

iv. The Slope-sign of f near -2

v. The Concavity-sign of f near $+3$