

MATH 161 WORKOUT 18 NAME: _____

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[Run: 04/08/2013 at 10:40 Seed: 6477. Order of Checkable Items: List.]

18-1. Let f be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = \frac{(x-3)(x-1)^3}{x^2-9}$$

Find the ∞ -height inputs of f .

18-2. Let f be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = \frac{(x-1)^2(x+1)^2}{x^3+8}$$

find the *offscreen* graph of f .

18-3. Let f be the function specified by the global input-output rule

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

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

18-4. Let f be the function specified by the global input-output rule

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

How many Height-sign change input(s) does f have?

18-5. Let f be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = \frac{x^2 - 16}{(x - 4)^2}$$

Where is the concavity of f *negative*?

18-6. Let f be the function specified by the global input-output rule

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

Where is the slope of f *positive*?

18-7. Let f be the function specified by the global input-output rule

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

Where is the height of f *negative*?