



Present

# The Dangerous World of Pre-Calculus (Part 1)

1996 Cerebellum Corporation • 800-VCR-REVV

## I. Rational Functions

### A. Review of Functions and Polynomials

1. functions
2. evaluating functions
3.  $f(x)$
4. polynomials

### B. Rational Functions

1. "ratio"
2. standard form

### C. Multiplying and Dividing

#### Rational Functions

1. multiplying across with FOIL
2. divide: invert and multiply
3. compound fractions

### D. Adding and Subtracting

#### Rational Functions

1. finding a common denominator
2. addition
3. subtraction
4. all four operations in one example

### E. Graphing Rational Functions

1. discontinuities
2. zero in the denominator
3. removable singularity

### F. Asymptotes – An Introduction

#### 1. vertical asymptotes

#### 2. horizontal asymptotes

### G. Finding Asymptotes

1. standard form
2. factoring the top and bottom
3. finding roots
4. finding horizontal asymptotes using the highest power of  $x$
5. checking your answer

### H. Sample Word Problems – Gums

## II. Systems of Linear Equations and Inequalities

### A. Solving Systems of Linear Equations

1. solving graphically
2. algebraic substitution
3. algebraic elimination

### B. Solving Systems of Inequalities

1. basics of inequalities
2. graphing linear inequalities

### C. Systems of Equations with More than Two Variables

1. graphing not good
2. algebraic substitution or elimination
3. no solution
4. multiple solutions

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Algebra *Part 2*

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Macroeconomics

Statistics *Part 1*

Statistics *Part 2*

Statistics *Part 3*

Calculus *Part 1*

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Physics

Biology

Pre-Calculus *Part 1*

Pre-Calculus *Part 2*

Chemistry *Part 1*

Chemistry *Part 2*

Chemistry *Part 3*

Psychology

Finance *Part 1*

Finance *Part 2*

Finance *Part 3*

Accounting *Part 1*

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Geology *Part 1*

Geology *Part 2*

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Organic Chemistry *Part 1*

Organic Chemistry *Part 2*

Organic Chemistry *Part 3*

Astronomy *Part 1*

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## I. Rational Function:

$$f(x) = \frac{h(x)}{g(x)}$$

## II. Brain candy for late-night procrastination:

S	I	T	R	S	P	I	N	O	T	I	M
M	O	G	A	S	U	C	K	E	R	8	4
E	D	U	D	L	A	C	I	D	A	R	S
T	R	K	I	D	E	V	I	A	N	T	S
S	A	N	C	L	X	O	L	2	S	G	U
Y	D	O	A	T	O	L	I	V	E	R	J
S	N	W	L	E	@	O	O	U	X	A	I
4	A	W	4	E	I	D	f	9	U	P	M
7	T	A	9	S	R	O	x	B	A	H	M
A	S	Y	M	P	T	O	T	A	L	L	Y
E	D	U	H	E	D	G	M	B	U	Y	3
&	G	M	U	L	L	E	B	E	R	E	C

### ANSWERS:

@	DUDE	GRAPH	SIT
&	DUH	GUMS	SPIN
ASYMPTOTALLY	EVIL	JIMMY	STANDARD
BABE	FOIL	KNOWWAY	SUCKER
BUY	FOOL	MORE	SYSTEMS
CEREBELLUM	fx	RADICAL	TOFU
DEVIANTS	GOOD	RADICAL 49	TRANSEXUAL

## III. Horizontal and Vertical Asymptotes:

