

Final Exam

12-20 question

1/2 ALEKS

-practice tests

-Midterm

-test1 & 3

1/2 Mine

-test1, mid, 3

-project

What is precalculus? study of Functions

How to represent functions?

data, graphs, equations

DATA can be plotted

A regression turns DATA into Functions

REGRESSIONS are graphed, evaluated, solved

EVALUATE: plug in $x=$ / by hand

use table in calculator, CALC 1:value

$y_1(x)$ in calculator

SOLVE: solve by hand /plug in y

$f(x) = 7$ $x=f^{-1}(7)$, intersection method, solver, table



quadratic has two faces

polynomials

degree, leading, end behaviour,
min, max, faces, zeros

rationals

VA, HA, SLANT

zeros, Volcanos, heartbeats

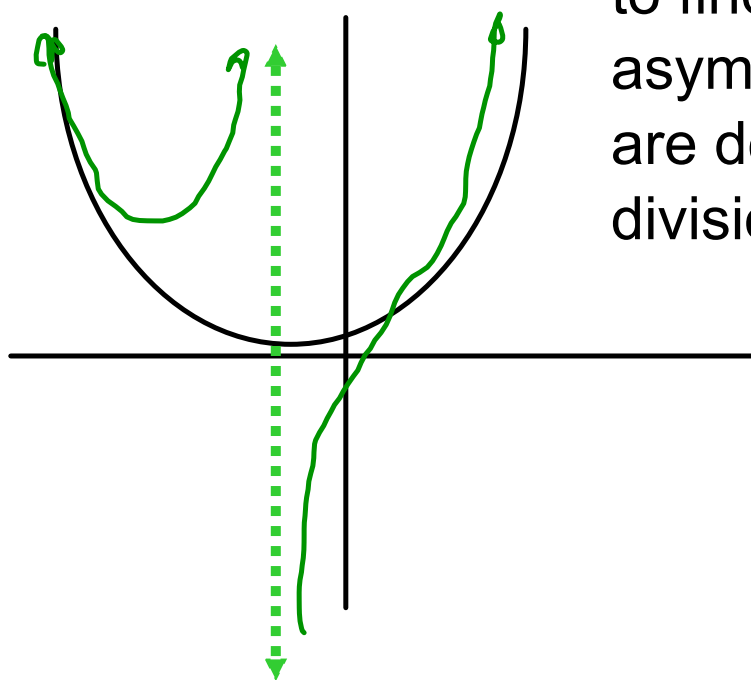
what is the end behaviour for

$$y = \frac{4(x+1)(x-3)}{(x-1)} \quad \text{DN}=2$$

$$(x-1) \quad \text{DD}=1$$

slant degree $\text{DN}-\text{DD}=2-1 = 1$

$$\begin{array}{r}
 \boxed{4x-4} \quad y = 4x - 4 \\
 x-1 \overline{) 4x^2 - 8x - 12} \\
 \underline{-(4x^2 - 4x)} \\
 -4x
 \end{array}$$



to find the slant asymptote you are doing long division!

Exponential

HA, growth/decay, %,

compound interest, $p = Qe^{(RT)}$

$R = .75 \dots 75\%$ $R = -.0025 = -.25\%$

Math 0: Solver $0 = P - Q e^{(RT)}$

P = ending

Half-life = time \rightarrow rate

Q = starting

half life is 5000

R = rate

P = 1

T = time

Q = 2

R = ? alpha enter

T = 5000



how old is an object that has 1/10 of its starting amount of C14?

P=1

Q=10

R=-1.3...

T=? alpha enter 16609.64...

Logs

properties, VA,

domain, range, inverse, composite
functions $(f \circ g)(x) = f(g(x))$,

transformation of functions

TRIG FUN

domain flavors: degrees... radians

converting, coterminals, reference

unit circle-

$\sin = y$ $\cos = x$ $\tan = y/x$

$\cot = x/y$ $\csc = 1/y$ $\sec = 1/x$

SOHCAHTOA

laws of Sine and Cosine

Identities

reciprocal ID, Quotient, Pythagorean

double, sum/difference, half

Period($2\pi/B$) Amplitude(A)

Phase Shift($-C/B$)

ex. $y = 100 - 1.2\sin(45-5x)$

period; $2\pi/5$ ampl: 1.2 PS: 9 raised: 100

