* You may use a G.C. table and graph
TBL SET (2nd window)
change Indpnt: ASK 2nd Graph-TABLE

SECTION 2.6 **Rational Functions**

1) Find the domain of $f(x) = \frac{(4x)}{(x-2)}$ and discuss the behavior of f near the excluded values. (using limits)

Domain:

$\lim_{x \to \_\_} f(x) =$ _____

$\lim_{x \to \_\_} f(x) =$ _____

2) Find the vertical and horizontal asymptotes of $f(x) = \frac{5x^2}{x^2 - 1}$

V.A. (eqn) set unique factors in D = 0

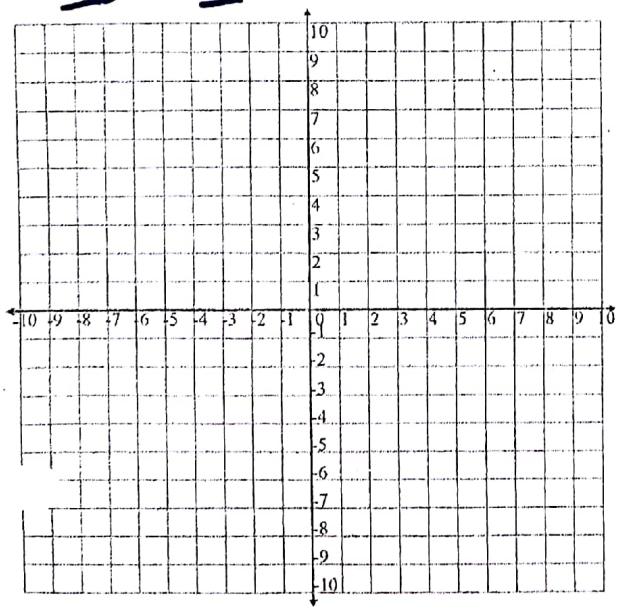
H.A. (eqn) compare degree of N to degree of D

Graph in calc - draw sketch
discuss limits around asymptotes

3) Sketch the graph of $f(x) = \frac{2}{(5-x)}$ and state its domain.

DOMAIN:

PLOT POINTS
use TBL in calc
Graph paper
NO rough sketch!



x-int (set N = 0)

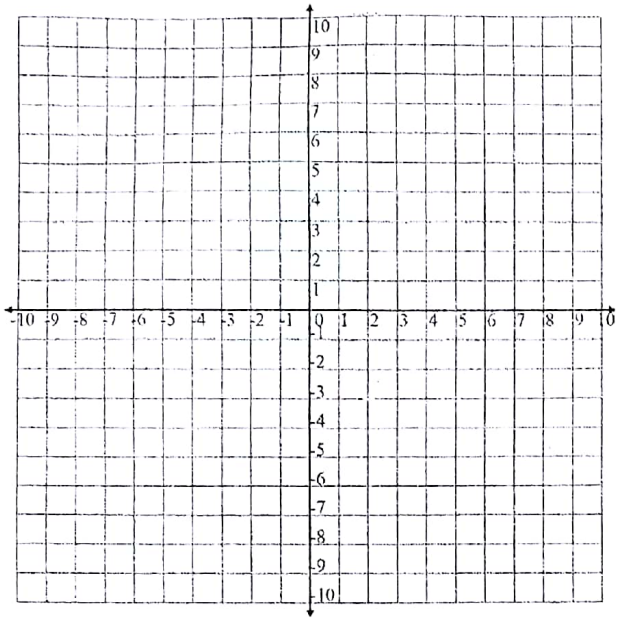
y-int (let x = 0)

V.A.

H.A

* For x-int set N = 0

4) Sketch the graph of $f(x) = \dfrac{3-2x}{x-1}$



Domain

x-int

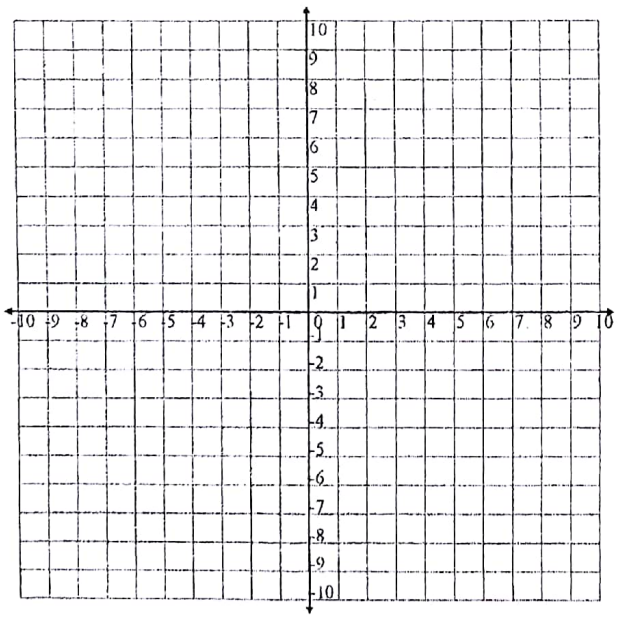
y-int

V.A

H.A.

Limits:

5) Sketch the graph of $f(x) = \dfrac{1+2x}{1-x^2}$



Domain

x-int

y-int

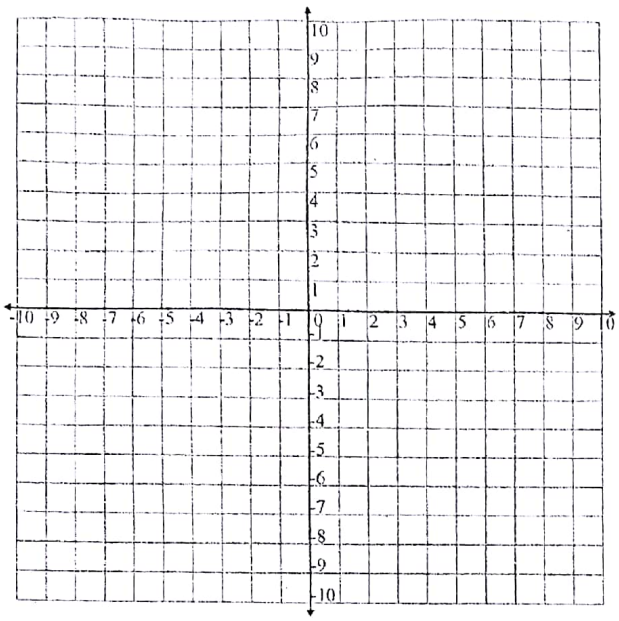
V.A

HA

Limits:

Sec 2.6 continued

6) Sketch the graph of $f(x) = \dfrac{2}{x^2 - 1} + 1$



7) Sketch the graph of $f(x) = \dfrac{2 + 3x - x^2}{1 + x}$