



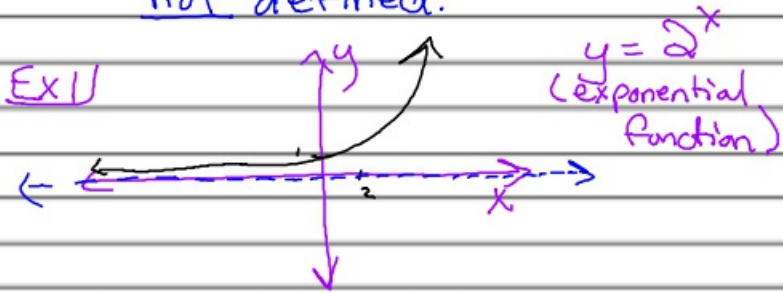
Essential Question: What are the important things we need to recall about functions?

Questions:

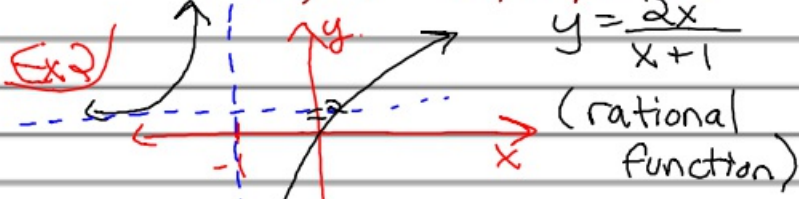
Notes Domain and Range

Domain: the inputs, the x-values, ~~that~~ left to right, the independent variable
Range: the output, the y-values, the dependent variable, \updownarrow

Asymptotes
occurs where a function is not defined.



horizontal asymptote at $y=0$
 $D: (-\infty, \infty) \{x \mid x \in \mathbb{R}\}$
 $R: (0, \infty) \{y \mid y > 0\}$



horiz. $y=2$
vert: $x=-1$
 $D: (-\infty, -1) \cup (-1, \infty) \{x: x \neq -1\}$
 $R: \{y: y \neq 2\}$

$(-\infty, 2) \cup (2, \infty)$

HW p. 12 #2

3 b, d; f, h, i, j

don't graph 1st

Try to find D, R from function

Questions:

Notes:

Notation (for Domain/Range)

Two choices

Interval
Notation

Set Builder
Notation

Indicates
asymptotes →

$(,)$ means endpoints
not defined
 $[,]$ means endpoints
are defined

$\{ x : x \in \mathbb{R} \}$
element of
 $x \neq 3$

the set
of

all #s
x

such
that

changes based
on function,
gives the
interval

Remember: asymptotes
occur wherever a function
is not defined

- ① can't have 0 in denominator
- ② can't take square root of neg.
- ③ no matter what number I
raise a base to, I will
never get a negative output