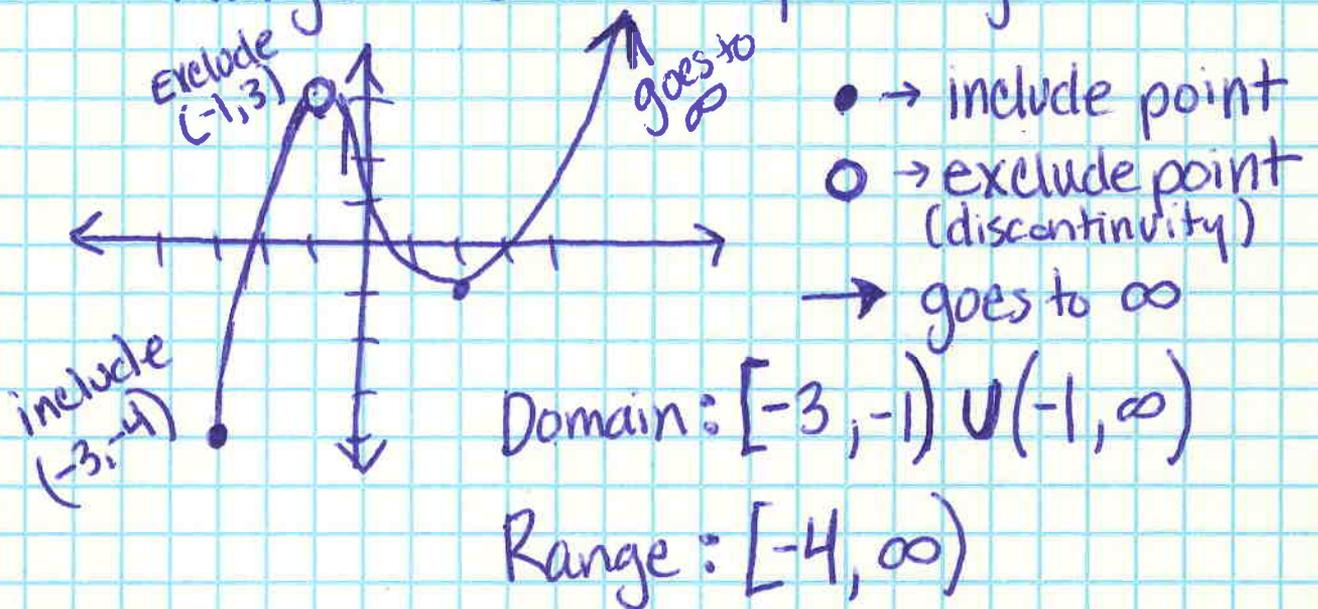


1.2 Analyzing Graphs

Domain \rightarrow set of inputs (x)

Range \rightarrow set of outputs (y)



Ex 3 Intercepts

where a graph crosses an axis

Algebraically

to find x -intercept, $y=0$ or $f(x)=0$

to find y -intercept, $x=0$ or $f(0)$

find y -intercept of $f(x) = \frac{-2x^3 + 4}{3}$

$$f(0) = \frac{-2(0)^3 + 4}{3}$$

$$y\text{-intercept} = \frac{4}{3}$$

Ex 4 x-intercepts

ROOT
ZERO
SOLUTION

you can have
multiple x-intercepts
or one
or none

FIND ROOTS (zeros, solutions, x-intercepts)

Set $f(x) = 0$, solve for x

$$f(x) = 2x^2 + x - 15$$

$$0 = 2x^2 + x - 15$$

$$= (2x - 5)(x + 3)$$

$$x = \frac{5}{2}, -3$$