Q:- Draw the following functions and discuss whether limit exists or not as (x,y) approaches to the given points. Find the limit, if it exists.

Q1, 2, 7

1) $f(x,y) = \frac{x+y}{x-y}$; $(x,y) = (0,0)$ and $(x,y) = (1,3)$

- Step1:- Plot the function (use plot3d())
- Step2:- Put $y = mx$
- Step3:- $S1 = f(x, mx)$ ✓
  & then use simplify(S1)

$$f(x,y) = \frac{-(m+1)}{(m-1)}$$

- Step 4:- Now check limit of this fxn, for different values of m
- Step5:- If same answers, then limit exist, else limit does not exist.