Partial and Total Functions

Function Graphs _____

For each of the following function definitions, give the <u>graph</u> of the function. Say whether this is a partial function or a total function on the integers. If the function is partial, say where the function is defined and undefined.

For example, the graph of f(x) = if x > 0 then x + 2 else x/0 is the set of ordered pairs $\{\langle x, x+2 \rangle | x > 0\}$. This is a partial function. It is defined on all integers greater than 0 and undefined on integers less than or equal to 0.

Functions:

- **1**. f(x) = if x + 2 > 3 then x * 5 else x/0
- **2**. f(x) = if x < 0 then 1 else f(x 2)
- **3**. f(x) = if x = 0 then 1 else f(x 2)