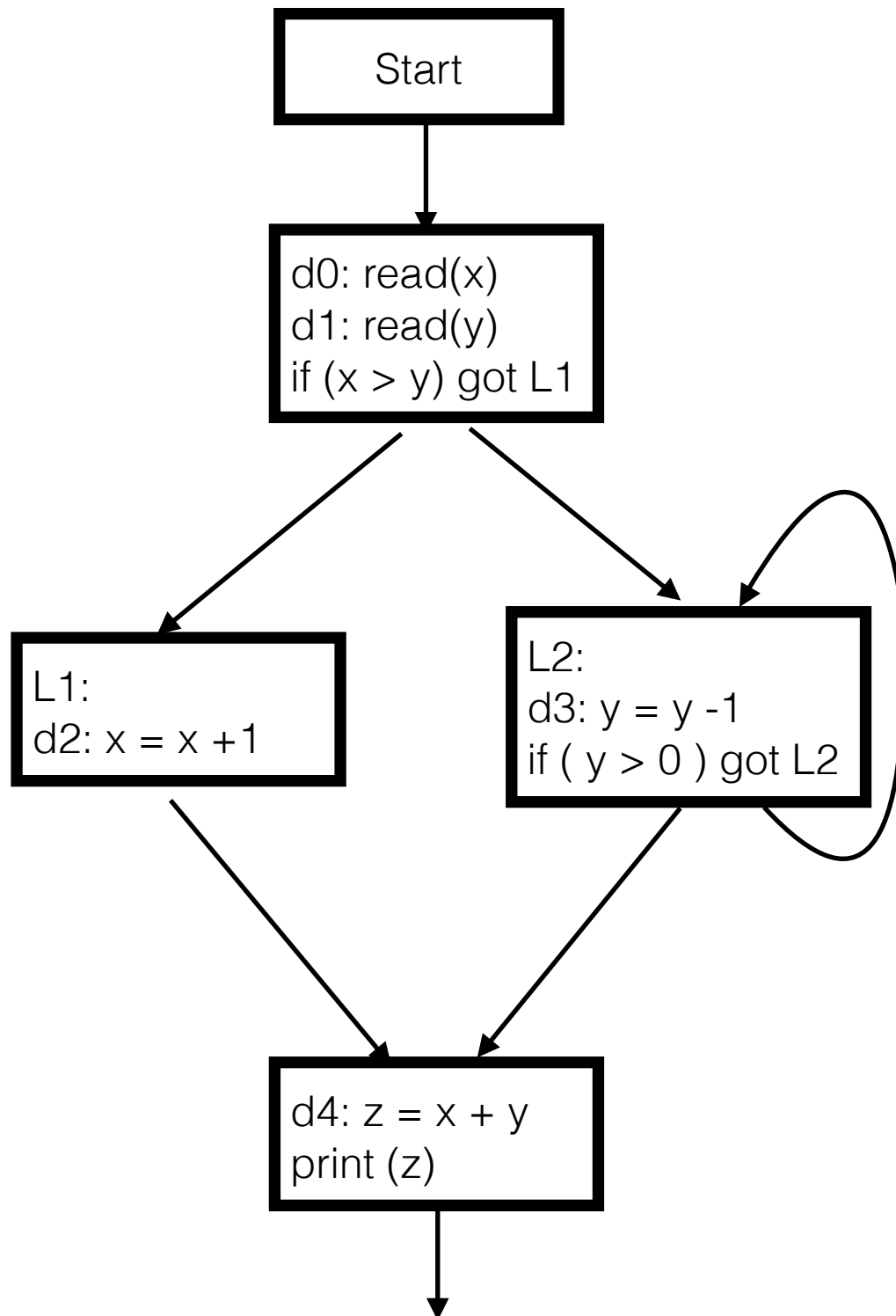
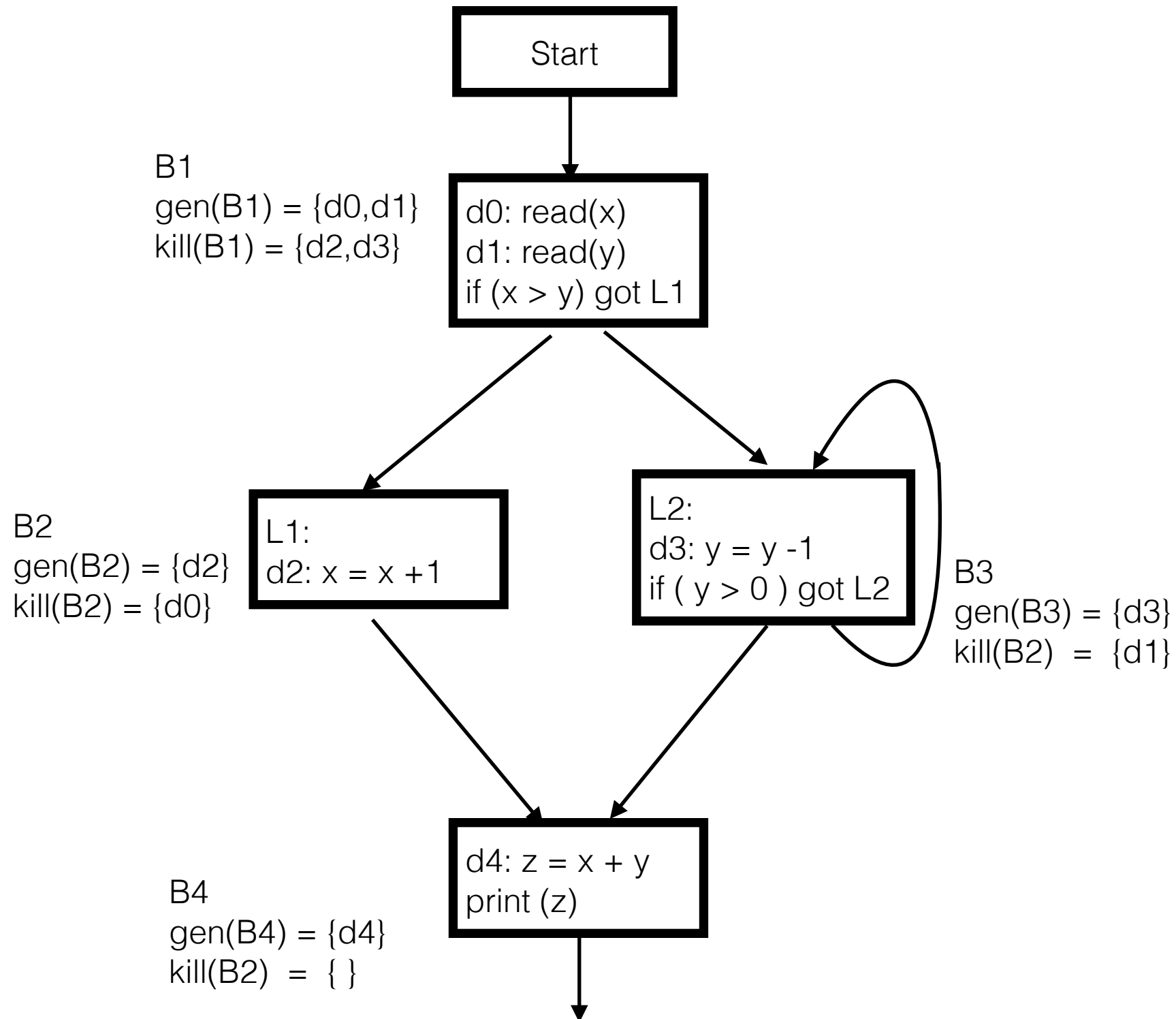


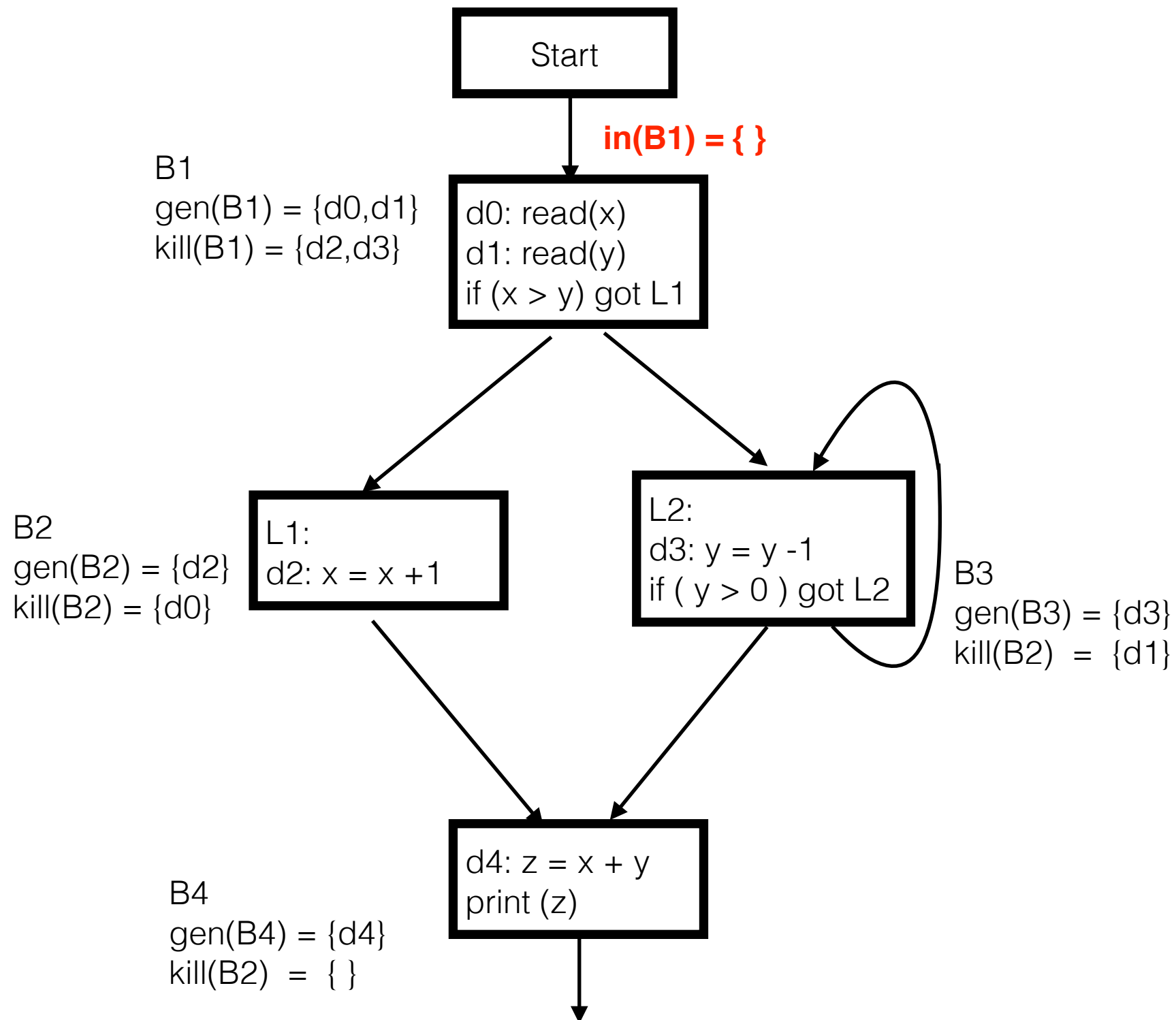
Reaching Definitions Example



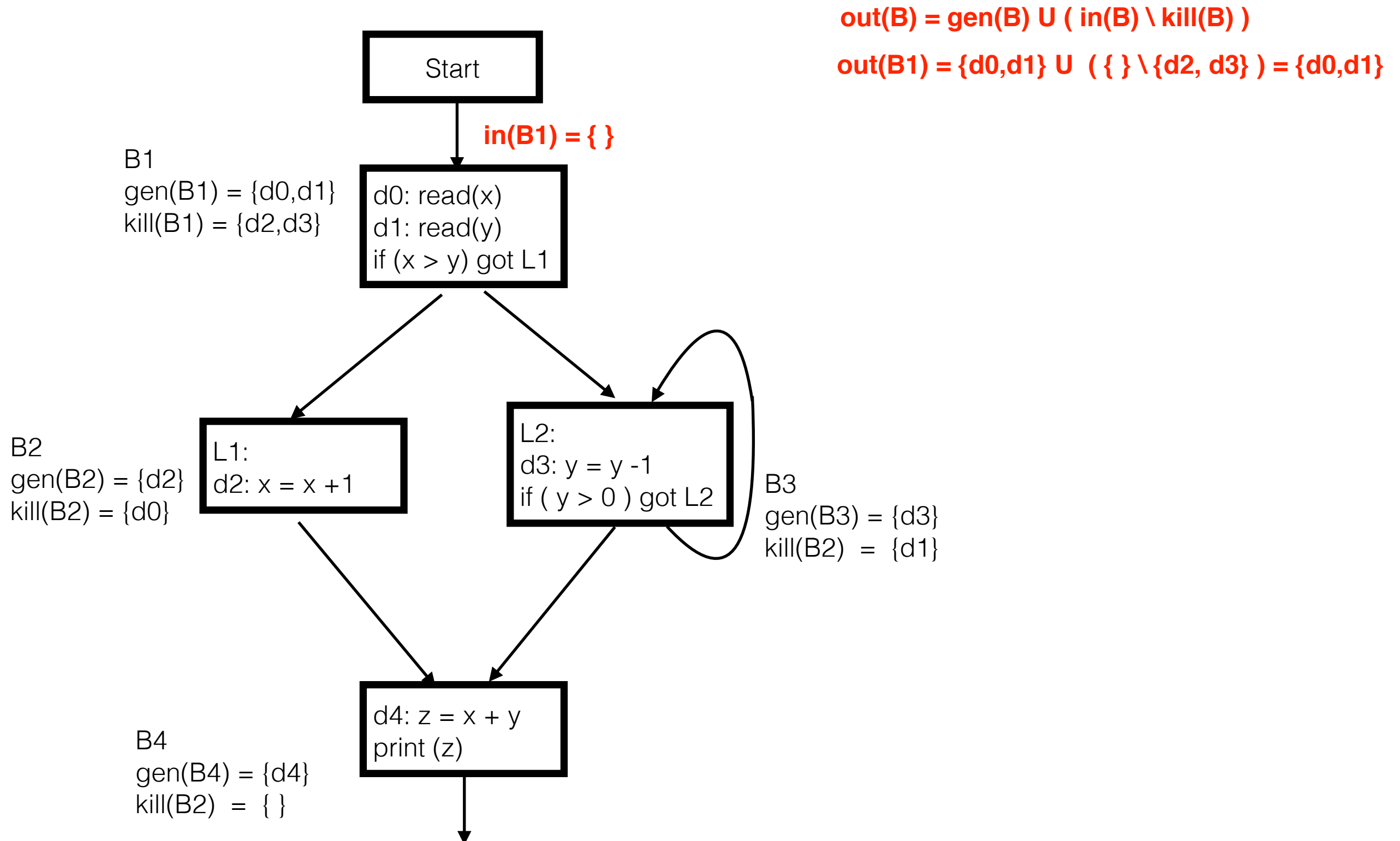
Reaching Definitions Example



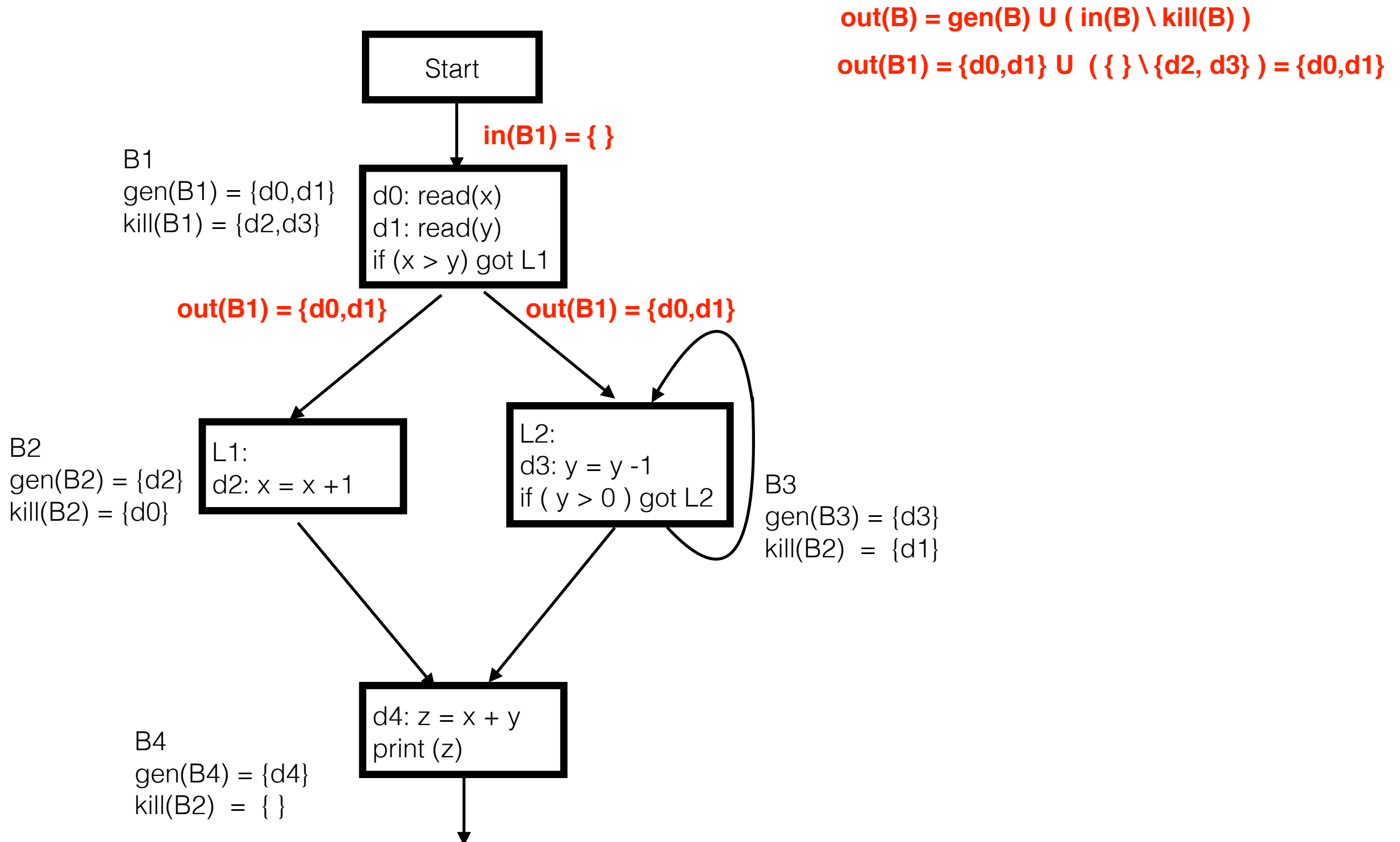
Reaching Definitions Example



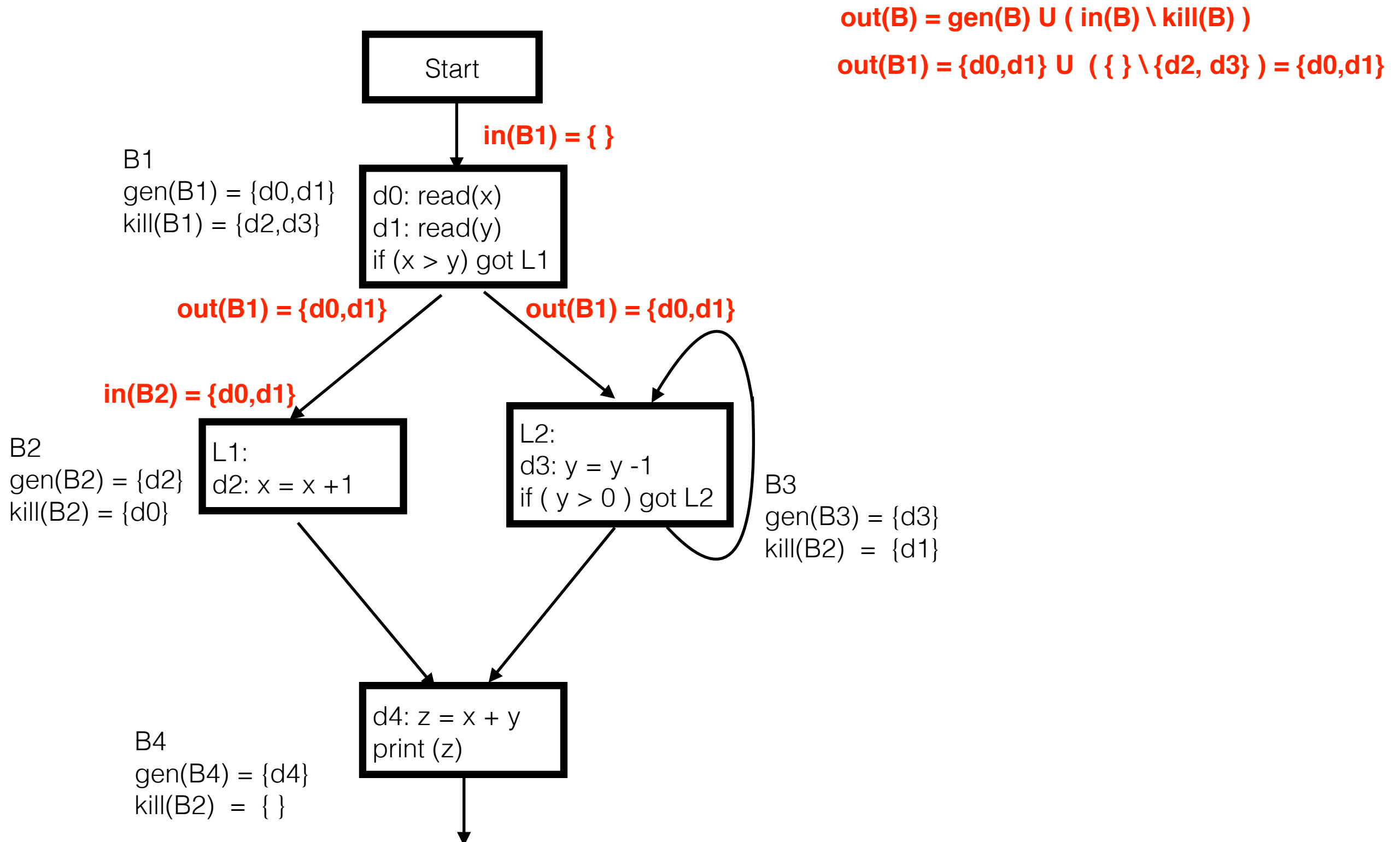
Reaching Definitions Example



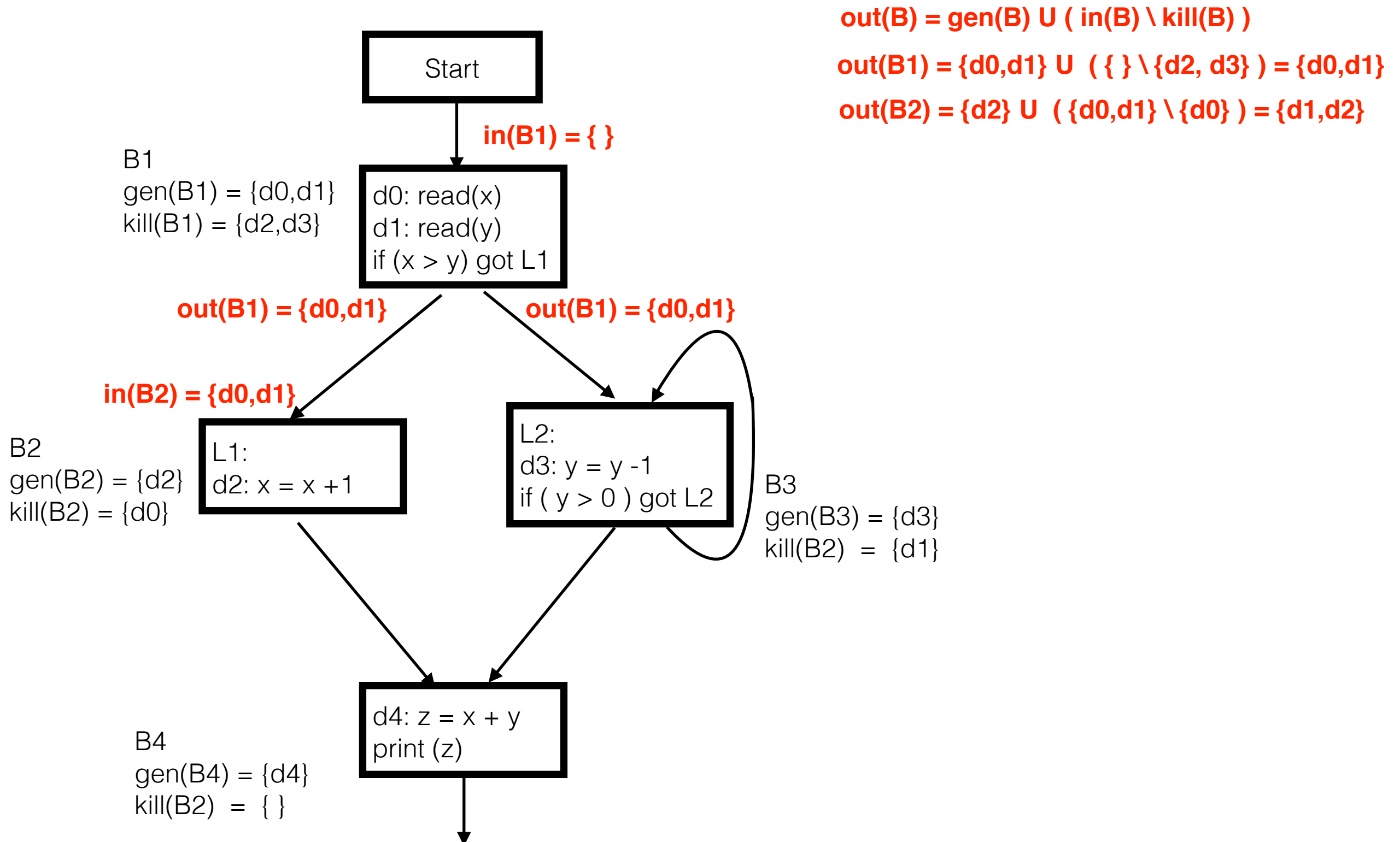
Reaching Definitions Example



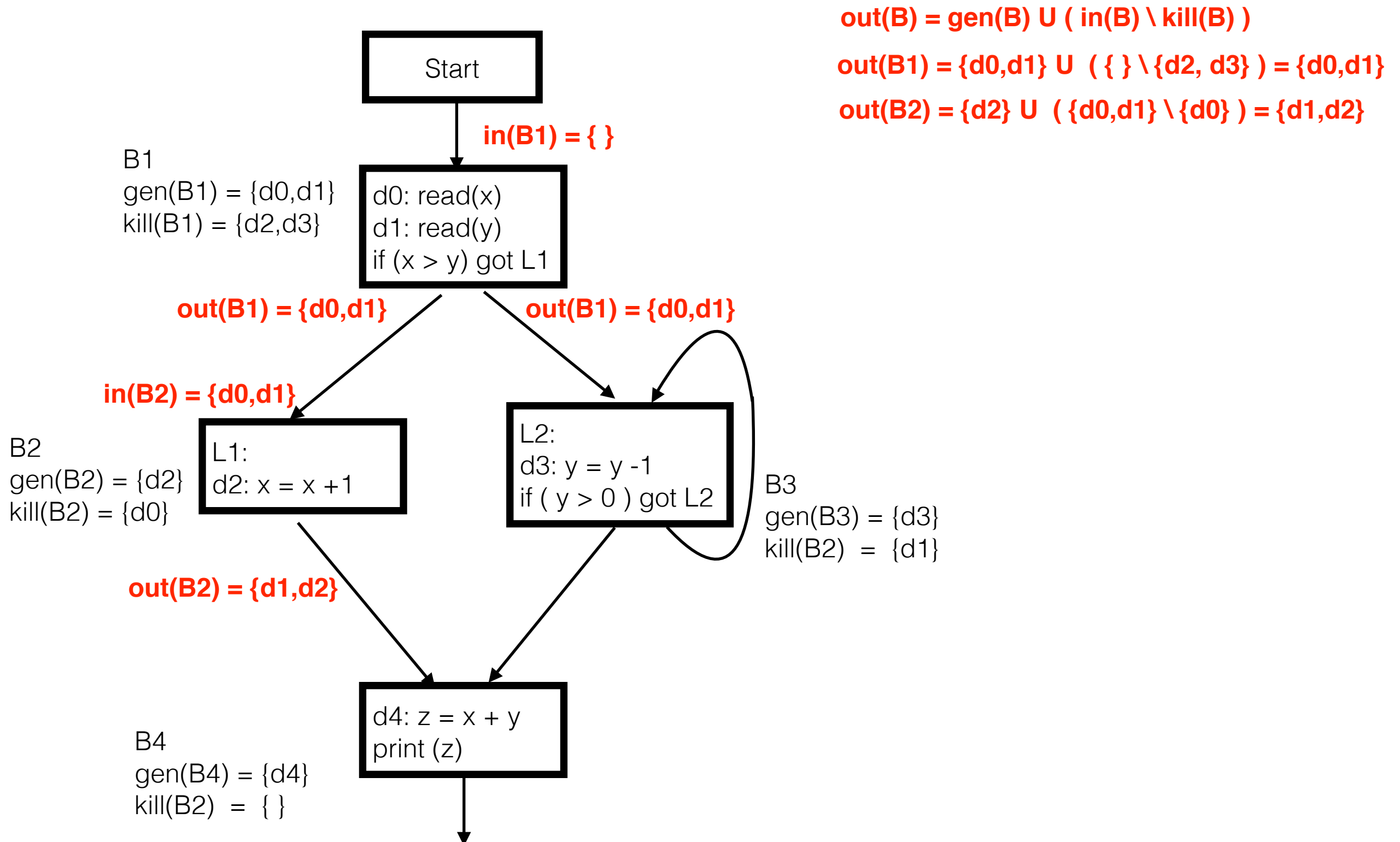
Reaching Definitions Example



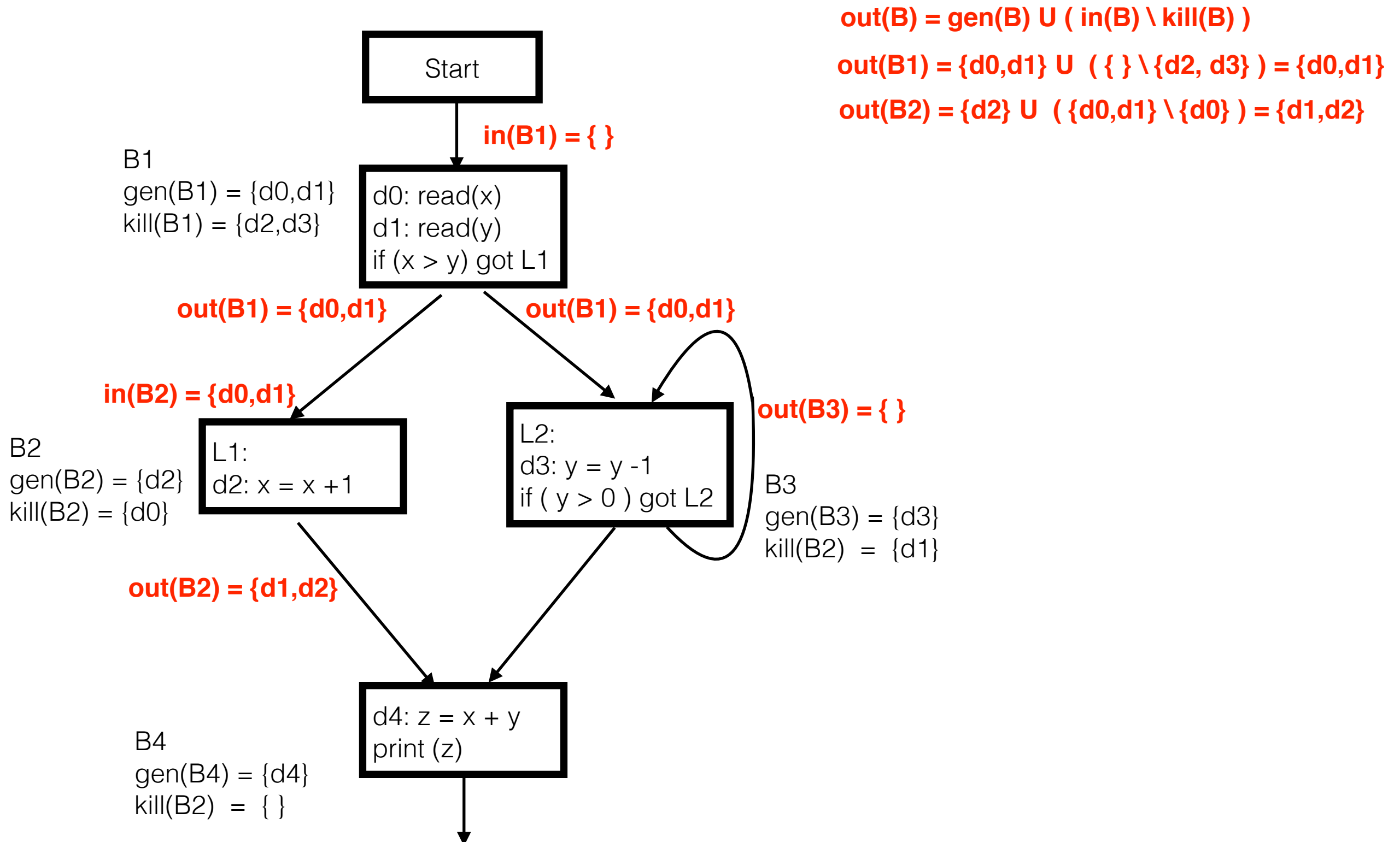
Reaching Definitions Example



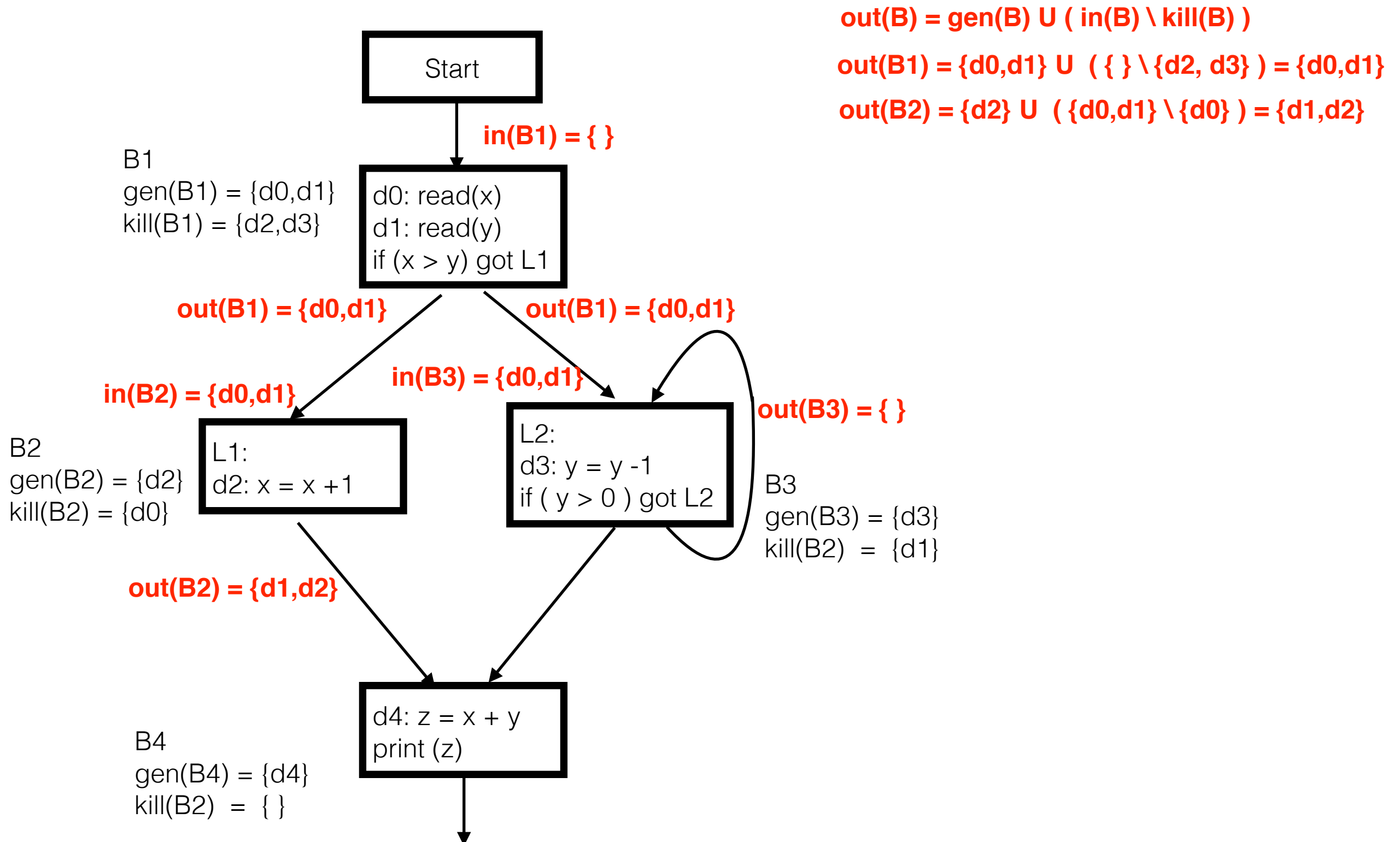
Reaching Definitions Example



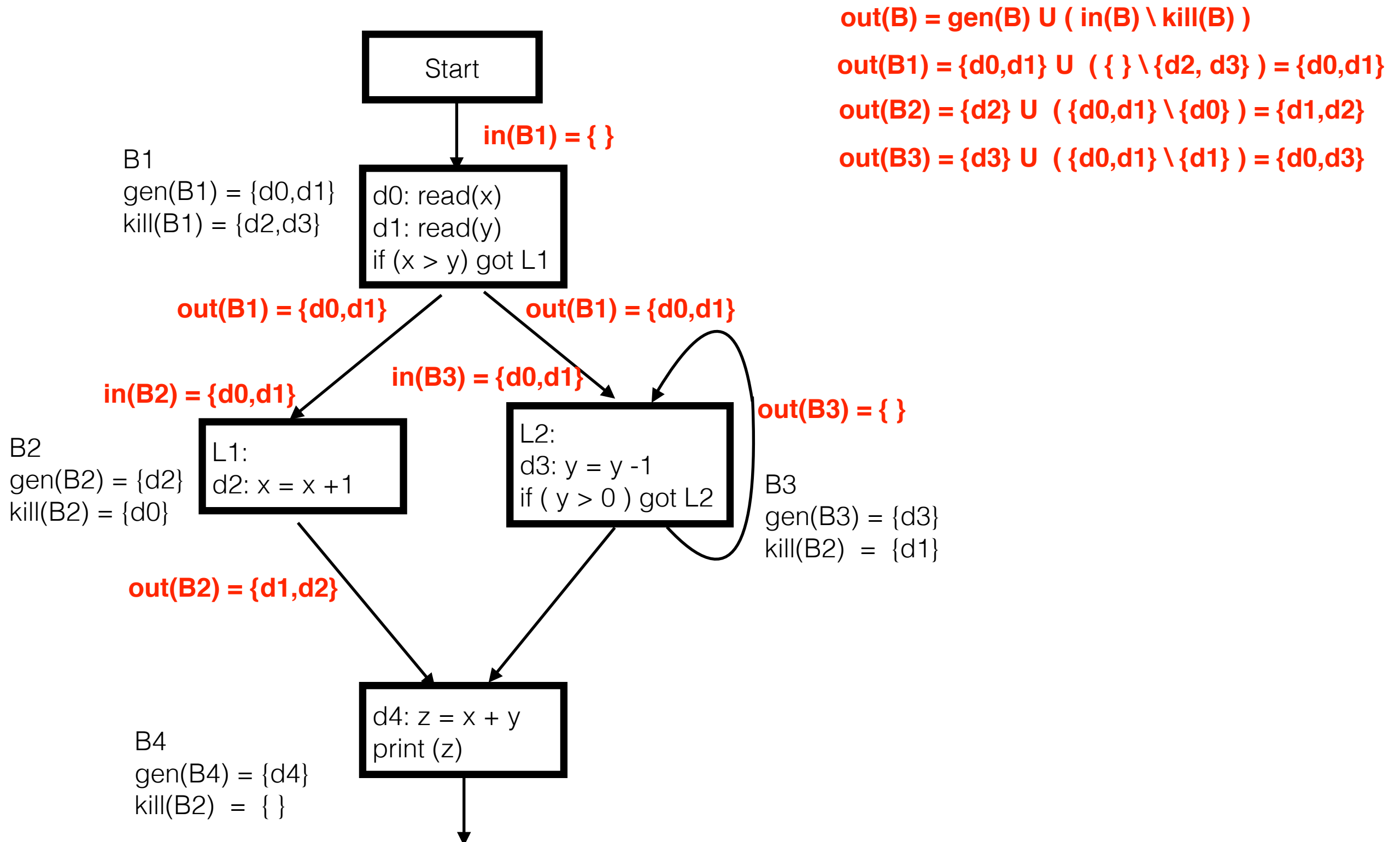
Reaching Definitions Example



Reaching Definitions Example



Reaching Definitions Example



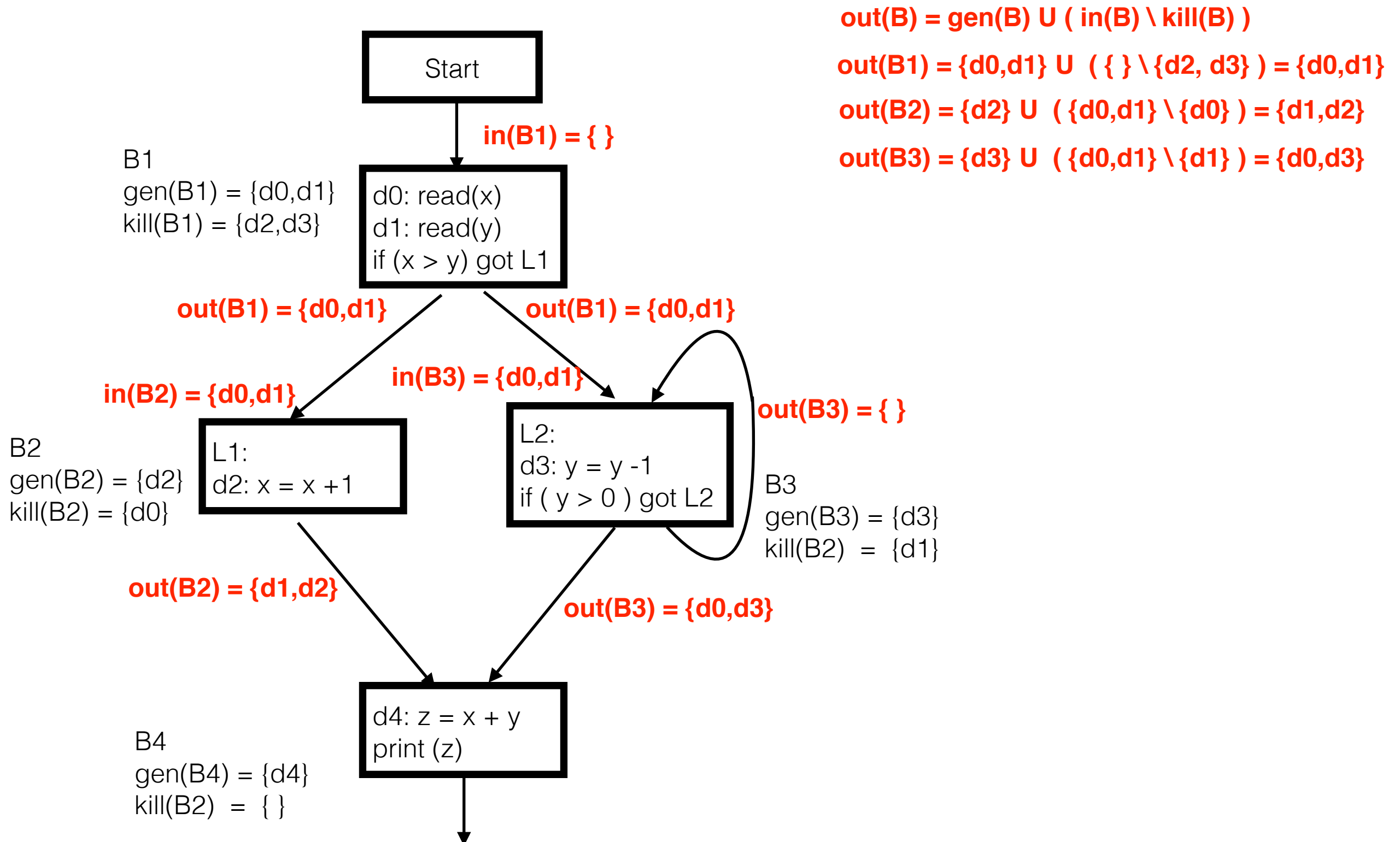
$$\text{out}(B) = \text{gen}(B) \cup (\text{in}(B) \setminus \text{kill}(B))$$

$$\text{out}(B1) = \{d0, d1\} \cup (\{\} \setminus \{d2, d3\}) = \{d0, d1\}$$

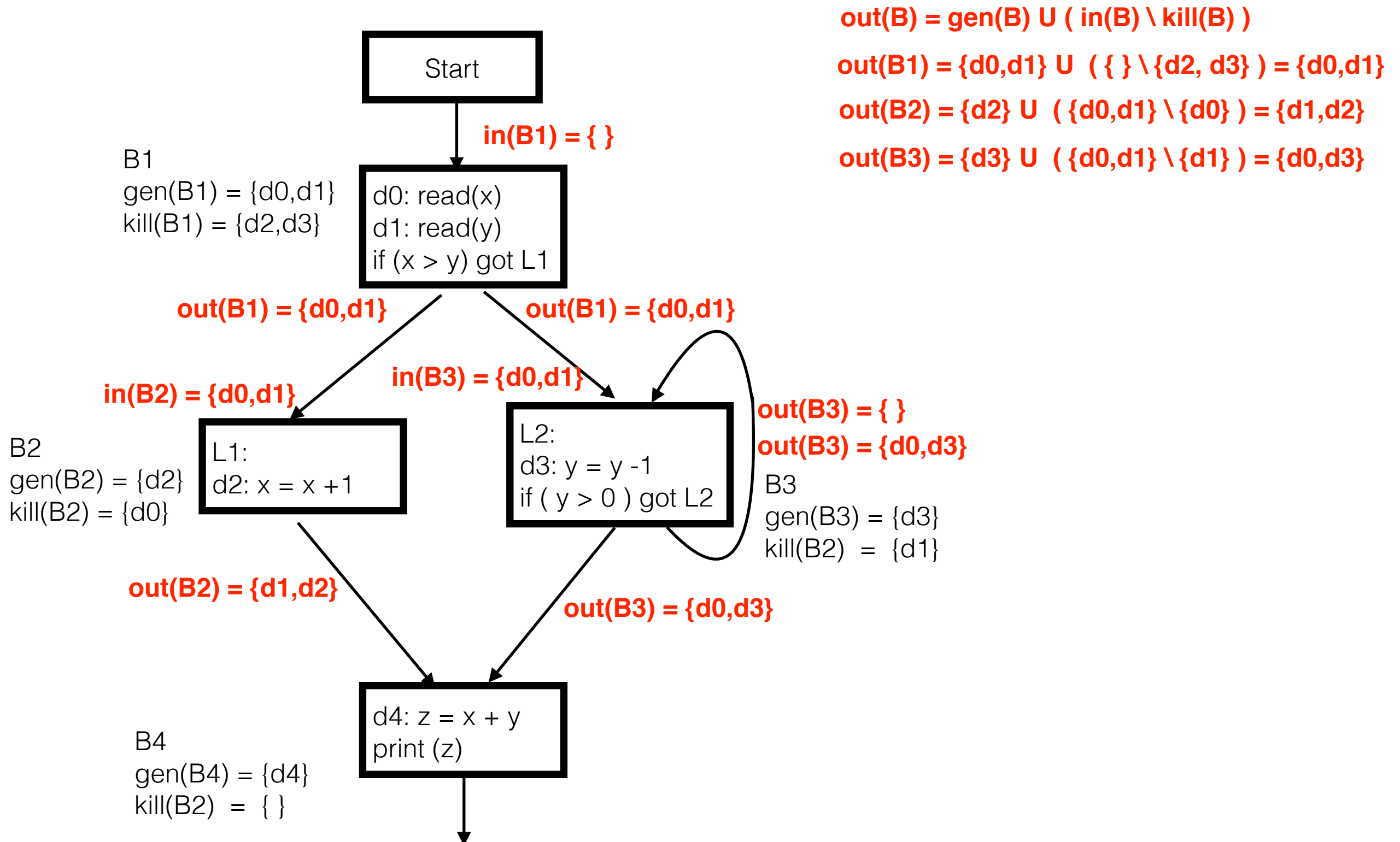
$$\text{out}(B2) = \{d2\} \cup (\{d0, d1\} \setminus \{d0\}) = \{d1, d2\}$$

$$\text{out}(B3) = \{d3\} \cup (\{d0, d1\} \setminus \{d1\}) = \{d0, d3\}$$

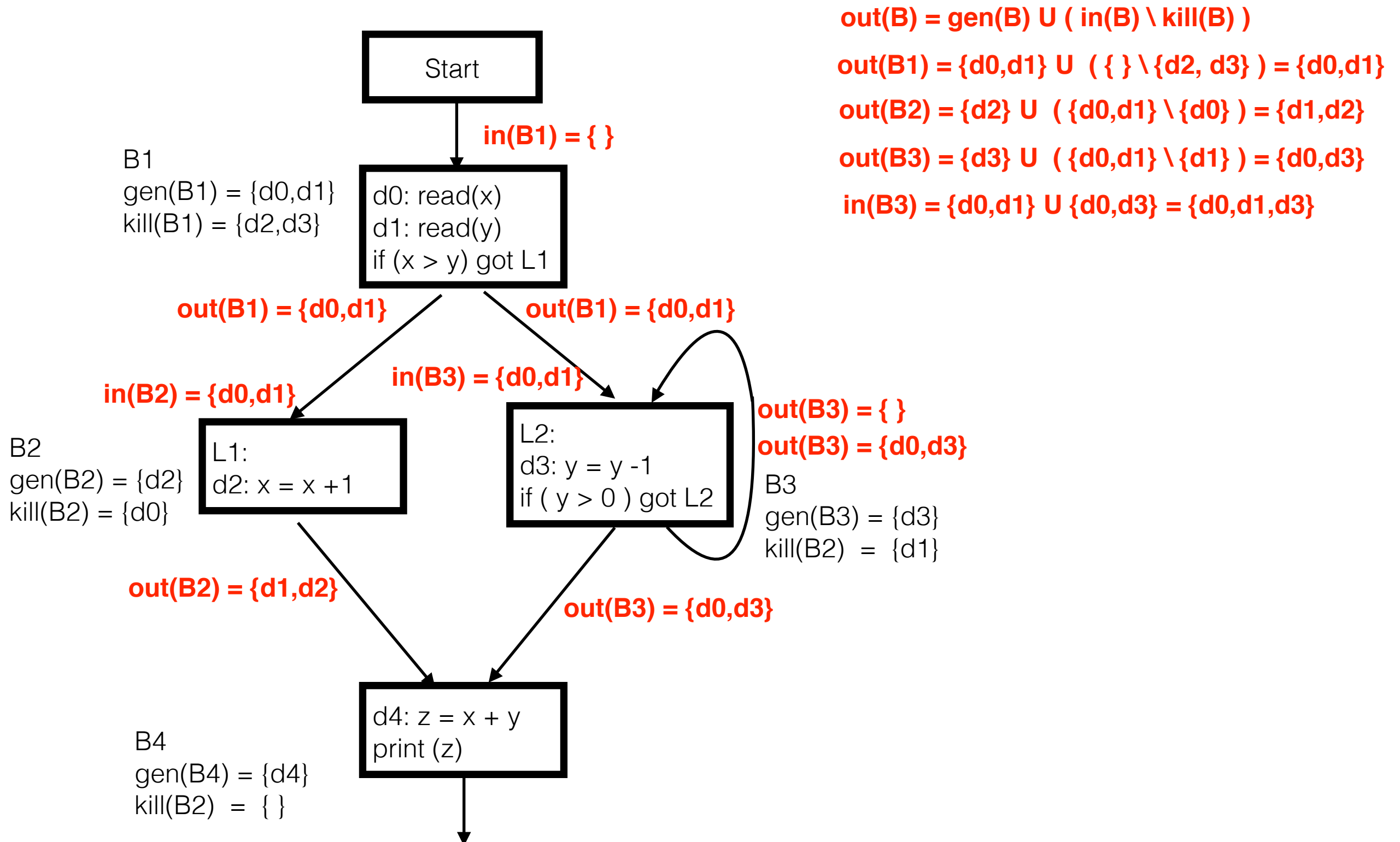
Reaching Definitions Example



Reaching Definitions Example



Reaching Definitions Example



$$\text{out}(B) = \text{gen}(B) \cup (\text{in}(B) \setminus \text{kill}(B))$$

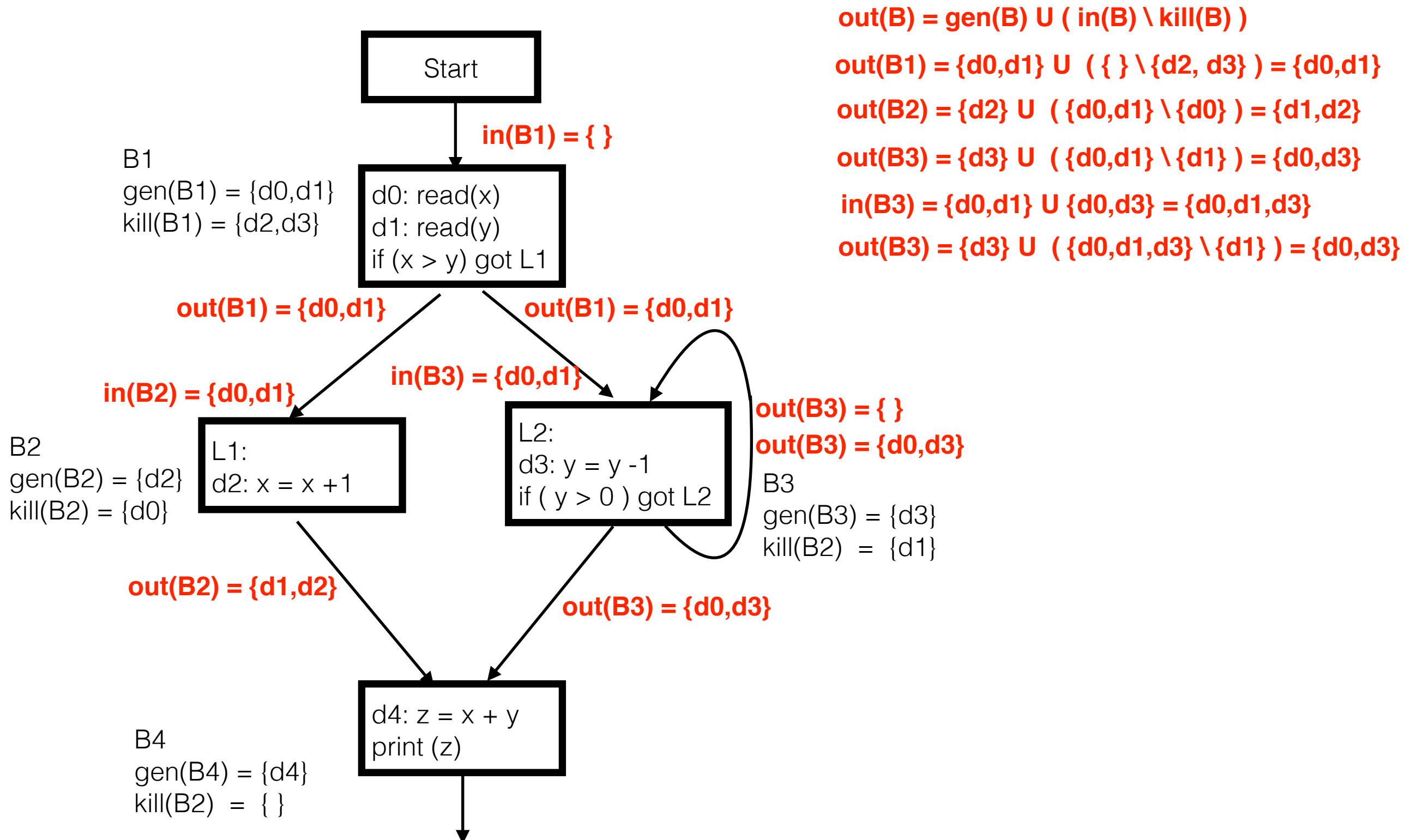
$$\text{out}(B1) = \{d0, d1\} \cup (\{\} \setminus \{d2, d3\}) = \{d0, d1\}$$

$$\text{out}(B2) = \{d2\} \cup (\{d0, d1\} \setminus \{d0\}) = \{d1, d2\}$$

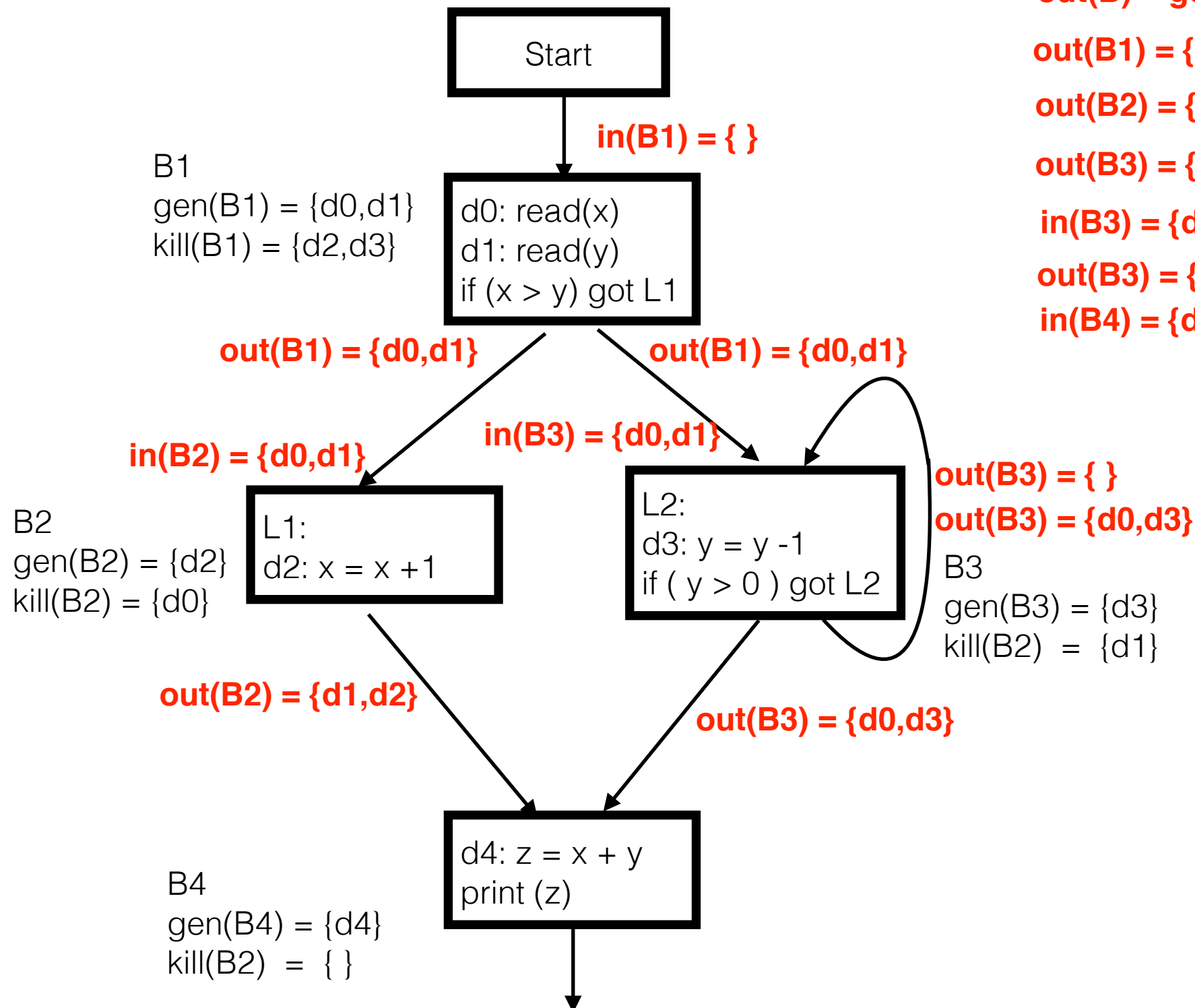
$$\text{out}(B3) = \{d3\} \cup (\{d0, d1\} \setminus \{d1\}) = \{d0, d3\}$$

$$\text{in}(B3) = \{d0, d1\} \cup \{d0, d3\} = \{d0, d1, d3\}$$

Reaching Definitions Example



Reaching Definitions Example



$$\text{out}(B) = \text{gen}(B) \cup (\text{in}(B) \setminus \text{kill}(B))$$

$$\text{out}(B1) = \{d0, d1\} \cup (\{\} \setminus \{d2, d3\}) = \{d0, d1\}$$

$$\text{out}(B2) = \{d2\} \cup (\{d0, d1\} \setminus \{d0\}) = \{d1, d2\}$$

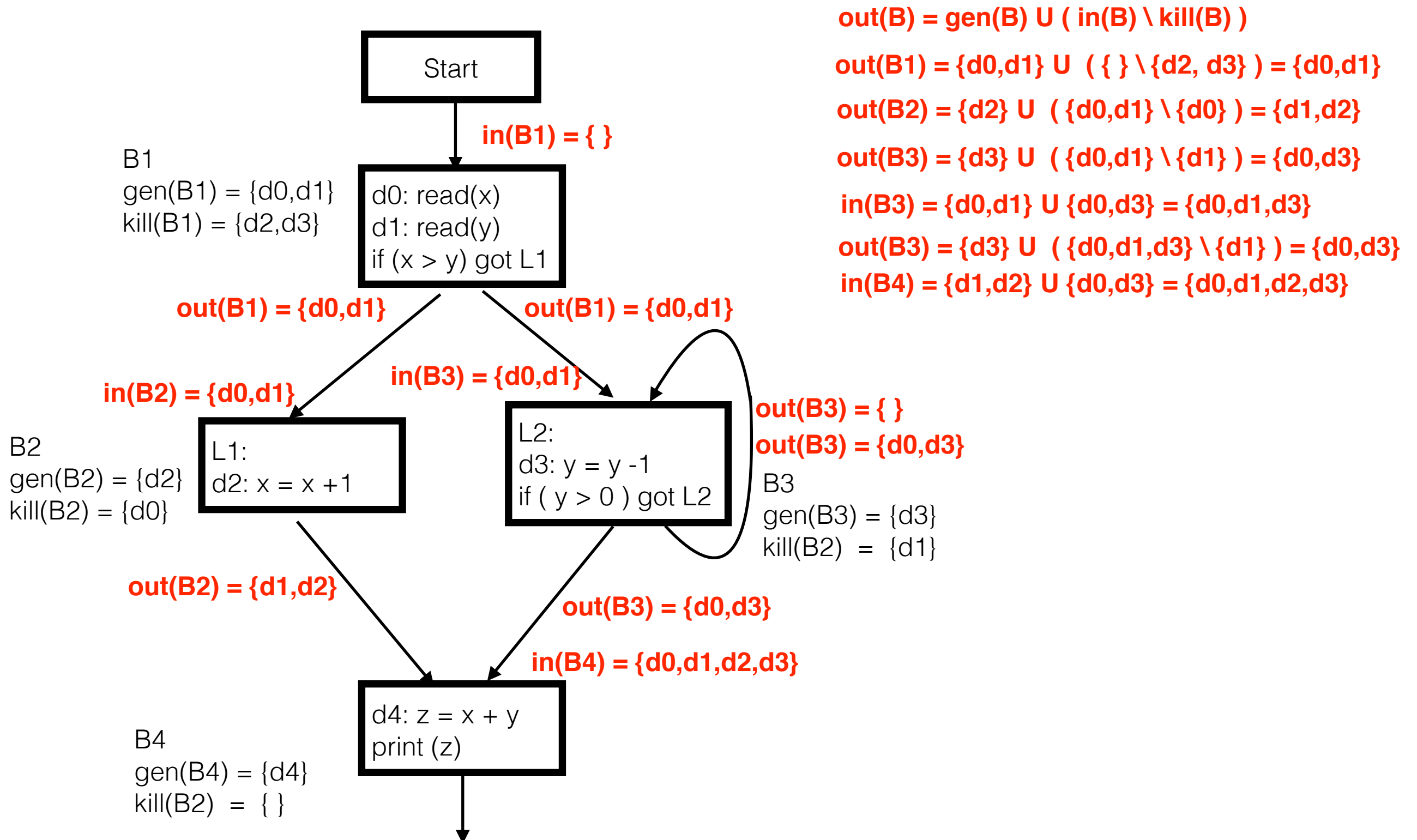
$$\text{out}(B3) = \{d3\} \cup (\{d0, d1\} \setminus \{d1\}) = \{d0, d3\}$$

$$\text{in}(B3) = \{d0, d1\} \cup \{d0, d3\} = \{d0, d1, d3\}$$

$$\text{out}(B3) = \{d3\} \cup (\{d0, d1, d3\} \setminus \{d1\}) = \{d0, d3\}$$

$$\text{in}(B4) = \{d1, d2\} \cup \{d0, d3\} = \{d0, d1, d2, d3\}$$

Reaching Definitions Example



$$\text{out}(B) = \text{gen}(B) \cup (\text{in}(B) \setminus \text{kill}(B))$$

$$\text{out}(B1) = \{d0, d1\} \cup (\{\} \setminus \{d2, d3\}) = \{d0, d1\}$$

$$\text{out}(B2) = \{d2\} \cup (\{d0, d1\} \setminus \{d0\}) = \{d1, d2\}$$

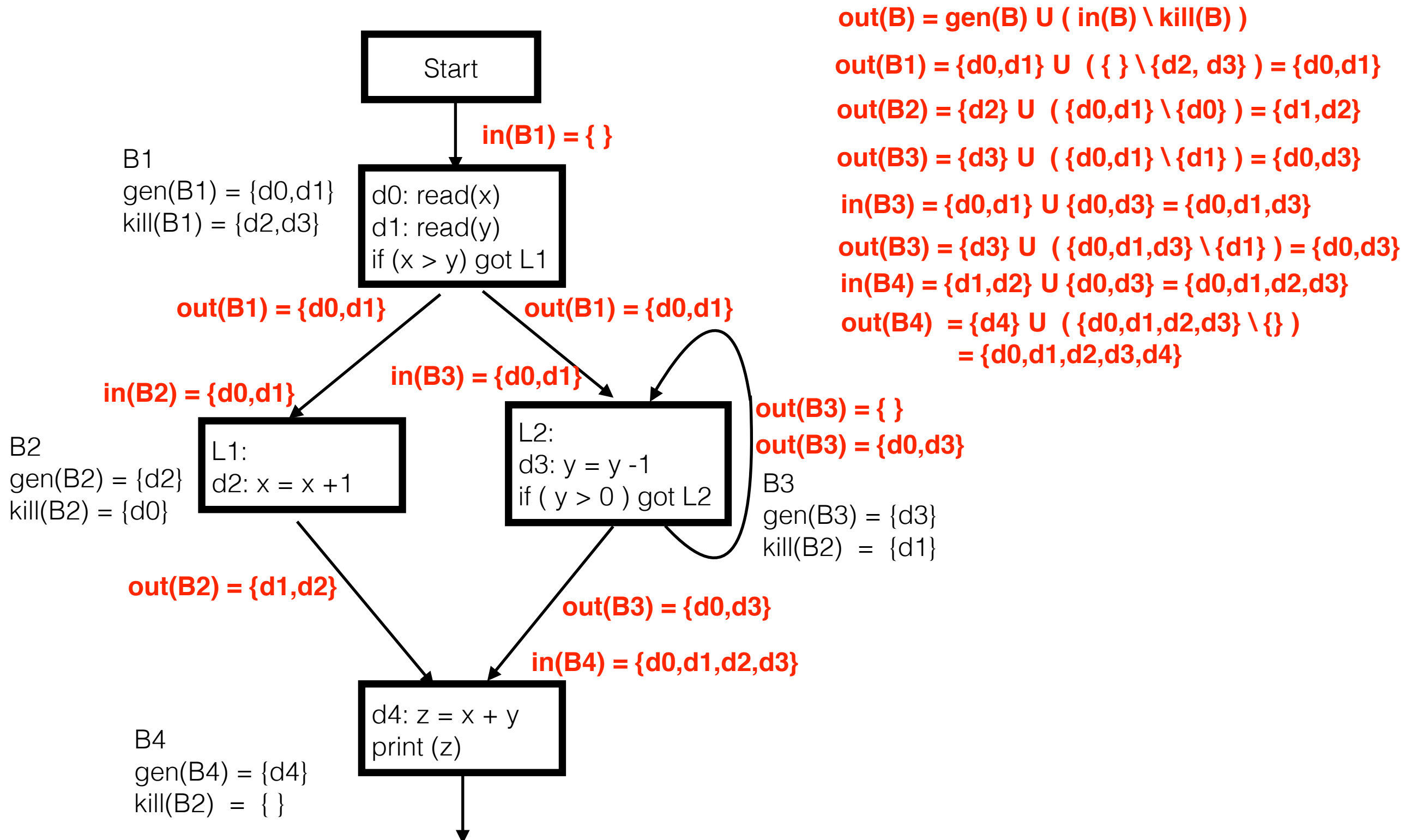
$$\text{out}(B3) = \{d3\} \cup (\{d0, d1\} \setminus \{d1\}) = \{d0, d3\}$$

$$\text{in}(B3) = \{d0, d1\} \cup \{d0, d3\} = \{d0, d1, d3\}$$

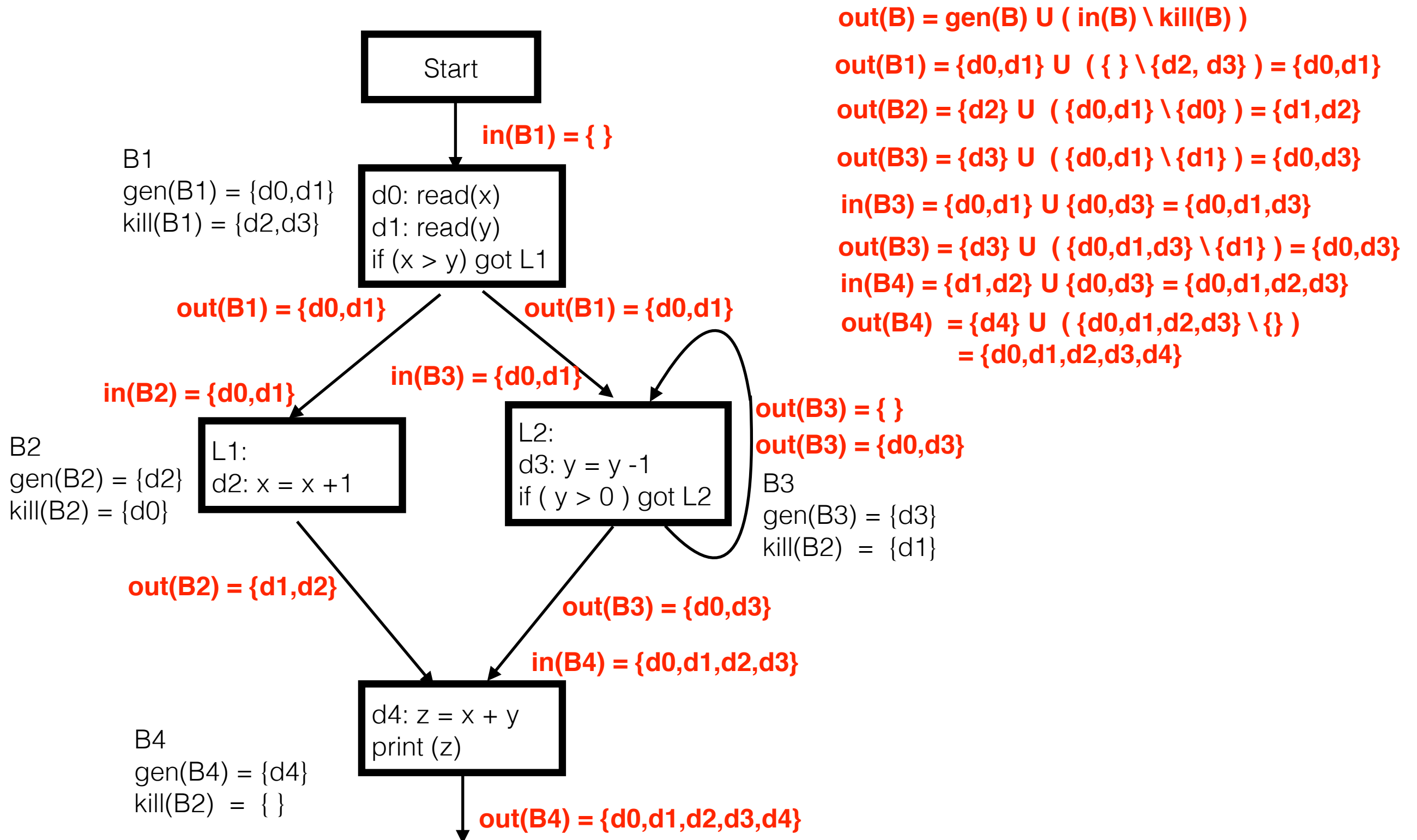
$$\text{out}(B3) = \{d3\} \cup (\{d0, d1, d3\} \setminus \{d1\}) = \{d0, d3\}$$

$$\text{in}(B4) = \{d1, d2\} \cup \{d0, d3\} = \{d0, d1, d2, d3\}$$

Reaching Definitions Example



Reaching Definitions Example



$$\text{out}(B) = \text{gen}(B) \cup (\text{in}(B) \setminus \text{kill}(B))$$

$$\text{out}(B1) = \{d0, d1\} \cup (\{\} \setminus \{d2, d3\}) = \{d0, d1\}$$

$$\text{out}(B2) = \{d2\} \cup (\{d0, d1\} \setminus \{d0\}) = \{d1, d2\}$$

$$\text{out}(B3) = \{d3\} \cup (\{d0, d1\} \setminus \{d1\}) = \{d0, d3\}$$

$$\text{in}(B3) = \{d0, d1\} \cup \{d0, d3\} = \{d0, d1, d3\}$$

$$\text{out}(B3) = \{d3\} \cup (\{d0, d1, d3\} \setminus \{d1\}) = \{d0, d3\}$$

$$\text{in}(B4) = \{d1, d2\} \cup \{d0, d3\} = \{d0, d1, d2, d3\}$$

$$\begin{aligned} \text{out}(B4) &= \{d4\} \cup (\{d0, d1, d2, d3\} \setminus \{\}) \\ &= \{d0, d1, d2, d3, d4\} \end{aligned}$$

$$\text{out}(B3) = \{\}$$

$$\text{out}(B3) = \{d0, d3\}$$

$$\begin{aligned} \text{B3} \\ \text{gen}(B3) &= \{d3\} \\ \text{kill}(B2) &= \{d1\} \end{aligned}$$

$$\text{out}(B3) = \{d0, d3\}$$

$$\text{in}(B4) = \{d0, d1, d2, d3\}$$