

Initial Condition
 $x \geq 5 \wedge v = 0$



Mode1

$$\dot{x} = v$$

$$\dot{v} = -g - Dv^2$$

$$\text{inv} : x \geq 0$$

Reset

$$x' = x$$

$$v' = v$$

Guard

$$x = 0$$

Mode2

$$\dot{x} = v$$

$$\dot{v} = -g - Dv^2$$

$$\text{inv} : x \geq 0$$

Guard

$$v = 0$$

Reset

$$x' = x$$

$$v' = -Kv$$

