

$$A(x, y) \leftarrow R(x, w), G(w, z), R(z, y)$$

$$B(x, y) \leftarrow R(x, w), G(w, w), R(w, y)$$

$$B \subseteq A?$$

Canonical database D for B
minimum needed

R		G	
\bar{x}	\bar{w}	\bar{w}	\bar{w}
\bar{w}	\bar{y}		

\rightarrow satisfies (\bar{x}, \bar{y})

$$(\bar{x}, \bar{y}) \in A? \quad \text{since } B \subseteq A$$

is there a mapping that give us \bar{x}, \bar{y} as sol of A?

yes

$$x \rightarrow \bar{x}$$

$$w \rightarrow \bar{w}$$

$$z \rightarrow \bar{w}$$

$$y \rightarrow \bar{y}$$

ok!

$$\text{does } A \subseteq B?$$

can database D:

R		D	
\bar{x}	\bar{w}	\bar{w}	\bar{z}
\bar{z}	\bar{y}		

$$(\bar{x}, \bar{y}) \in B? \quad \text{is there a mapping?}$$

$$x \rightarrow \bar{x}$$

$$w \rightarrow \bar{w}$$

$$w \rightarrow \bar{z}$$

$$y \rightarrow \bar{y}$$

)

we can't have w mapped to 2 different things \rightarrow No Mappings

$$(\bar{x}, \bar{y}) \notin B$$

$$A \not\subseteq B$$