

Phase 11 . 8 : Relational Image

The relational image $R(\text{--- } S \text{ ---})$ gives the image of set S under relation R .

Example 1 : Simple relational image

$$R(S)$$

Example 2 : Relational image with set literal

$$R(\{1, 2, 3\})$$

Example 3 : Relational image with singleton set

$$\text{parentOf}(\{\text{john}\})$$

Example 4 : Relational image with composition

$$R \circ S(A)$$

Example 5 : Relational image with inverse

$$R^{-1}(S)$$

Example 6 : Set comprehension with relational image (Solution 35 pattern)

$$\{p : \text{Person} \mid p \in \text{dom } \text{parentOf} \bullet (p, \text{parentOf}(\{p\}))\}$$

Example 7 : Chained relational images

$$R(S)(T)$$