

$$(x, z) \in S \circ R$$

$$\iff$$

$$\exists y \in Y$$

$$((x, y) \in R)$$

$$\wedge$$

$$((y, z) \in S)$$

$$(S \diamond R)(x, z)$$

$$=$$

$$\int^{y \in Y}$$

$$R(x, y)$$

$$\times$$

$$S(y, z)$$