predicate logic:

$$\begin{aligned}\exists v_0 \exists v_1 \exists v_2 \exists v_3 \exists v_4 \, (&\mathbf{b}(v_0) \wedge s(v_0) \wedge \mathrm{F}(v_0, v_1) \\ &\wedge \mathrm{G}(v_0, v_2) \wedge t(v_2) \wedge r(v_1, v_2) \\ &\wedge \mathrm{H}(v_2, v_3) \wedge s(v_3) \wedge t(v_3) \wedge r(v_1, v_3) \\ &\wedge \mathbf{c}(v_4) \wedge \mathrm{H}(v_4, v_3))\end{aligned}$$

attribute-value logic:

$$\begin{aligned}&\mathbf{b} : (s \wedge \mathrm{G} : (t \wedge \mathrm{H} : (s \wedge t)) \wedge [\mathrm{F}, \mathrm{G}] : r \wedge [\mathrm{F}, \mathrm{G} \cdot \mathrm{H}] : r) \\ &\quad \wedge \ \mathbf{b} \cdot \mathrm{G} \cdot \mathrm{H} \triangleq \mathbf{c} \cdot \mathrm{H}\end{aligned}$$

attribute-value matrix:

$$\mathbf{b}\begin{bmatrix} s & \\ \mathrm{F} & \boxed{1} \\ \mathrm{G} & \boxed{2}\begin{bmatrix} t & \\ \mathrm{H} & \boxed{3}\, s \wedge t \end{bmatrix} \end{bmatrix}$$

$$r(\boxed{1}, \boxed{2})$$

$$r(\boxed{1}, \boxed{3})$$

$$\mathbf{c}\begin{bmatrix} \mathrm{H} & \boxed{3} \end{bmatrix}$$