

Practice Problems

$$\begin{aligned} \text{(a) } wlp(i := 2; a[j] := a[i] * i, a[i] = 3) \\ &= wlp(i := 2, wlp(a[j] := a[i] * i, a[i] = 3)) \\ &= wlp(i := 2, i = j ? a[i] * i = 3 : a[i] = 3) \\ &= j = 2 ? a[2] * 2 = 3 : a[2] = 3 \\ &= j = 2 ? a[2] = \frac{3}{2} : a[2] = 3 \end{aligned}$$

$$\begin{aligned} \text{(b) } wlp(x := y, z := x/y, z \geq 9) \\ &= wlp(x := y, wlp(z := \frac{x}{y}, z \geq 9)) \\ &= wlp(x := y, \frac{x}{y} \geq 9) \\ &= \frac{y}{y} \geq 9 \\ &= 1 \geq 9 \\ &= F \end{aligned}$$