

3η Σειρά Ασκήσεων - Λύση 1ης άσκησης

Οι αριστερότεροι όροι στους οποίους διαφέρουν οι δύο εκφράσεις σε κάθε βήμα σημειώνονται με ~~~~

(α)

$$1. \underset{\sim}{f}(X, \underset{\sim}{g}(a), Y) \quad \underset{\sim}{f}(\underset{\sim}{c}, Y, \underset{\sim}{g}(X)) \quad \{X = X, Y = Y\}$$

$$2. \underset{\sim}{f}(\underset{\sim}{c}, \underset{\sim}{g}(a), Y) \quad \underset{\sim}{f}(\underset{\sim}{c}, Y, \underset{\sim}{g}(c)) \quad \{X = c, Y = Y\}$$

$$3. \underset{\sim}{f}(\underset{\sim}{c}, \underset{\sim}{g}(a), \underset{\sim}{g}(a)) \quad \underset{\sim}{f}(\underset{\sim}{c}, \underset{\sim}{g}(a), \underset{\sim}{g}(c)) \quad \{X = c, Y = g(a)\}$$

αποτυχία

(β)

$$1. \underset{\sim}{a}(X, \underset{\sim}{f}(X), \underset{\sim}{f}(Y)) \quad \underset{\sim}{a}(\underset{\sim}{g}(b), Y, \underset{\sim}{f}(f(X))) \quad \{X = X, Y = Y\}$$

$$2. \underset{\sim}{a}(\underset{\sim}{g}(b), \underset{\sim}{f}(\underset{\sim}{g}(b)), \underset{\sim}{f}(Y)) \quad \underset{\sim}{a}(\underset{\sim}{g}(b), Y, \underset{\sim}{f}(f(g(b)))) \quad \{X = g(b), Y = Y\}$$

$$3. \underset{\sim}{a}(\underset{\sim}{g}(b), \underset{\sim}{f}(\underset{\sim}{g}(b)), \underset{\sim}{f}(f(g(b)))) \quad \underset{\sim}{a}(\underset{\sim}{g}(b), \underset{\sim}{f}(\underset{\sim}{g}(b)), \underset{\sim}{f}(f(g(b)))) \quad \{X = g(b), Y = f(g(b))\}$$

Πιο γενικός ταυτοποιητής $X = g(b), Y = f(g(b))$

(γ)

$$1. \underset{\sim}{p}(s(2), \underset{\sim}{X}, \underset{\sim}{*}(Y, X)) \quad \underset{\sim}{p}(s(2), \underset{\sim}{4}, \underset{\sim}{+}(X, X)) \quad \{X = X, Y = Y\}$$

$$2. \underset{\sim}{p}(s(2), \underset{\sim}{4}, \underset{\sim}{*}(Y, 4)) \quad \underset{\sim}{p}(s(2), \underset{\sim}{4}, \underset{\sim}{+}(4, 4)) \quad \{X = 4, Y = Y\}$$

αποτυχία

(δ)

$$1. \underset{\sim}{f}(A, \underset{\sim}{/}(B, A)) \quad \underset{\sim}{f}(0, \underset{\sim}{/}(1, A)) \quad \{A = A, B = B\}$$

$$2. \underset{\sim}{f}(0, \underset{\sim}{/}(B, 0)) \quad \underset{\sim}{f}(0, \underset{\sim}{/}(1, 0)) \quad \{A = 0, B = B\}$$

$$3. \underset{\sim}{f}(0, \underset{\sim}{/}(1, 0)) \quad \underset{\sim}{f}(0, \underset{\sim}{/}(1, 0)) \quad \{A = 0, B = 1\}$$

Πιο γενικός ταυτοποιητής $A = 0, B = 1$

(ε)

1. $\hat{\cdot}(X, \cdot(x, \cdot(x, T)))$ $\hat{\cdot}(T, \cdot(Y, \cdot(Z, \cdot(0, \cdot(0, []))))$
 $\{X = X, T = T, Y = Y, Z = Z\}$
2. $\hat{\cdot}(X, \cdot(x, \cdot(x, X)))$ $\hat{\cdot}(X, \cdot(Y, \cdot(Z, \cdot(0, \cdot(0, []))))$
 $\{X = X, T = X, Y = Y, Z = Z\}$
3. $\hat{\cdot}(X, \cdot(x, \cdot(x, X)))$ $\hat{\cdot}(X, \cdot(x, \cdot(Z, \cdot(0, \cdot(0, []))))$
 $\{X = X, T = X, Y = x, Z = Z\}$
4. $\hat{\cdot}(X, \cdot(x, \cdot(x, X)))$ $\hat{\cdot}(X, \cdot(x, \cdot(x, \cdot(0, \cdot(0, []))))$
 $\{X = X, T = X, Y = x, Z = x\}$
5. $\hat{\cdot}(\cdot(0, \cdot(0, [])), \cdot(x, \cdot(x, \cdot(0, \cdot(0, []))))$ $\hat{\cdot}(\cdot(0, \cdot(0, [])), \cdot(x, \cdot(x, \cdot(0, \cdot(0, []))))$
 $\{X = \cdot(0, \cdot(0, [])), T = \cdot(0, \cdot(0, [])), Y = x, Z = x\}$

Πιο γενικός ταυτοποιητής $X = [0,0], T = [0,0], Y = x, Z = x$

(στ)

1. $\hat{\cdot}(X, \cdot(2, T))$ $\hat{\cdot}(T, \cdot(X, \cdot(2, [])))$ $\{X = X, T = T\}$
2. $\hat{\cdot}(X, \cdot(2, X))$ $\hat{\cdot}(X, \cdot(X, \cdot(2, [])))$ $\{X = X, T = X\}$
3. $\hat{\cdot}(2, \cdot(2, 2))$ $\hat{\cdot}(2, \cdot(2, \cdot(2, [])))$ $\{X = 2, T = 2\}$

αποτυχία