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Module 6 Self Check

* 1. FAIL, because the two expressions are not equal constants
  2. {}. Empty set because the two inputs are equal
  3. { x / Fred }
  4. { x / Bam-Bam , y / Barney }
  5. {x / Barney , y / Wilma }
  6. { x son(Barney), y / Barney }
  7. { y / Barney , x / son(Barney) }
  8. FAIL, see below
  9. { x / Fred }
  10. FAIL, y cannot be Fred and George

1. (son Barney ?x) and (son ?y (son Barney))

From previous step, we use ?x = Bam-Bam

Unify(son(Barney, ?x),(son(?y (son Barney)), {})

Unify([Barney, ?x], [(?y (son(Barney)], Unify(son, son))

Unify(son, son) = {}

#possible failure if not both son

Unify([Barney, ?x], [(?y (son Barney)], {})

Unify([?x], [son(Barney)], Unify(Barney, ?y), {})

Unify(Barney, ?y) = { y / Barney}

# possible failure if Barney or y already in KB and assigned differently

Unify([?x], [son(Barney)], { y / Barney})

Unify([], [], Unify(?x, son(Barney), { y / Barney }))

Unify(?x, son(Barney), { y / Barney }) = {x / son(Barney) }

# possible failure if son(Barney) already assigned to different variable or y already assigned content

Unify([], { y / Barney}), {x / son(Barney) })

Return ({y / Barney} {x / son(Barney)})