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Meghan
Douglas

Homework 03

Facts:

married(james, cathy).
married(keith, lisa).
married(jimmy, betsey).
sister(lisa, jimmy).
sister(laura, jimmy).
sister(meghan, paige).
sister(jen, keith).
brother(brady, paige).
brother(jerry, cathy).
brother(johnny, jenna).

Rules:

sister_in_law(SiblingInLaw, SisterInLaw) ←
married(SiblingInLaw, X), sister(X, SisterInLaw).
sister_in_law(SiblingInLaw, SisterInLaw) ←
brother(SiblingInLaw, B), married(B, SisterInLaw).
sister_in_law(SiblingInLaw, sisterInLaw) ←
married(SiblingInLaw, Y), brother(Y, Z),
married(Z, sisterInLaw).
brother_in_law(SiblingInLaw, BrotherInLaw) ←
married(SiblingInLaw, X), brother(X, BrotherInLaw).
brother_in_law(SiblingInLaw, BrotherInLaw) ←
sister(SiblingInLaw, S), married(BrotherInLaw, S).
brother_in_law(SiblingInLaw, BrotherInLaw) ←
married(SiblingInLaw, Y), sister(Z, Y),
married(Z, BrotherInLaw).

Queries:

married(jimmy, betsey)?	YES
sister(meghan, paige)?	YES
brother(keith, jerry)?	NO
sister_in_law(lisa, jen)?	YES
brother_in_law(johnny, jimmy)?	NO