Bottom up Proof Demonstrations

Using propositions (No Variables)

Start from facts and use rules to generate all possible atoms

Bottom-up proof

health $\leftarrow$ sustenance $\wedge$ shelter.
sustenance $\leftarrow$ supermacs $\wedge$ sweets.
sustenance $\leftarrow$ bread $\wedge$ water.
shelter $\leftarrow$ house.
house.
water.
bread.

Bottom-up proof

health ← sustenance ∧ shelter.
sustenance ← supermacs ∧ sweets.
sustenance ← bread ∧ water.
shelter ← house.
house.
water.
bread.

{house, water, bread}

Bottom-up proof

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{house, water, bread}
{house, water, bread, shelter}

Bottom-up proof

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house.
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bread.

{house, water, bread}
{house, water, bread, shelter}
{house, bread, water, shelter, sustenance}

Bottom-up proof

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sustenance ← supermacs ∧ sweets.
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house.
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{house, water, bread}
{house, water, bread, shelter}
{house, bread, water, shelter, sustenance}
{house, bread, water, shelter, sustenance, health}

Bottom-up proof

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{house, water, bread}
{house, water, bread, shelter}
{house, bread, water, shelter, sustenance}
{house, bread, water, shelter, sustenance, health}

Hence we can conclude any of the atoms given to be true, e.g. health.