

Confirmation of a business plan to sell 55% of an LLC corporation

We assume the method and apparatus of Meth8/VŁ4 with Tautology as the designated proof value, **F** as contradiction, N as truthity (non-contingency), and C as falsity (contingency). The 16-valued truth table is row-major and horizontal, or repeating fragments of 128-tables, sometimes with table counts, for more variables. (See ersatz-systems.com.)

LET ~ Not, ¬ ; + Or, ∨, ∪, ⊔ ; - Not Or; & And, ∧, ∩, ⊓, ·, ∘ , ⊗ ; \ Not And;
> Imply, greater than, ⟶, ⇒ , ↦, ≻, ⊃, ↠ ; < Not Imply, less than, ∈, ≺, ⊂, ⊬, ⊭, ⟵, ≲ ;
= Equivalent, ≡, :=, ⇔, ↔, ≙, ≈, ≃ ; @ Not Equivalent, ≠, ⊕;
% possibility, for one or some, ∃, ∃!, ◊, M; # necessity, for every or all, ∀, □, L;
(z=z) T as tautology, ⊤, ordinal 3; (z@z) **F** as contradiction, Ø, Null, ⊥ , zero;
(%z>#z) N as non-contingency, Δ, ordinal 1; (%z<#z) C as contingency, ∇, ordinal 2;
~(y < x) (x ≤ y), (x ⊆ y), (x ⊑ y); (A=B) (A~B).
Notes: for clarity, we usually distribute quantifiers onto each designated variable; and for ordinal arithmetic, the result is implied.

We evaluate a conjecture for marketing a business as follows.

The director and original owner of an LLC business, of 100 shares valued at $100, sells 55% of shares to a principal co-owner for *x* amount. This means the director owns 45% of the shares, and the principal owns 55% of the shares with the controlling right to sell the business. An external buyer is obtained by broker, principal, or director. Unless stipulated otherwise, the re-selling buyer pays off the co-owners for *y* amount as respectively prorated at 55% to the principal and 45% to the director.

After external acquisition, the original co-owners have respectively $0.55y - x$ and $0.45y + x$. For example without the expense of a broker, if x =$55 and y = $110,000, then after business sale the principal co-owner has 0.55*$110,000 - $55 = $60,445, and the director co-owner has 0.45*$110,000 + $55 = $49,555. The return on investment for the principal co-owner is $60,445 / $55 or 109,900%.

LET p, q, r, s: principal, director, broker, buyer.

Both the director is less than the principal and the principal, and with no broker, implies the buyer. (1.1.1)

(((q<p)&p)&~r)>s ; TTTT TTTT TTTT TTTT (1.1.2)

Remark 1.1.2: Eq. 1.1.2 is tautologous, to confirm the conjecture and business plan.

For an agent/broker to be included,

Both the director is less than the principal and the principal, and with broker, implies the buyer. (1.2.1)

(((q<p)&p)& r)>s ; TTTT TTTT TTTT TTTT (1.2.2)

Remark 1.2.2: Eq. 1.2.2 is tautologous, to confirm the conjecture and business plan, and making the broker transparent. Similarly by stipulating the director and/or the principal staying on with the buyer as consequent is also transparent to the tautology.