

A simple robust standard for the individualization of fingerprints

Based upon Locard's qualitative and quantitative standards

Quantity is Galton characteristics

Quality is ridge features (shapes)

Insufficiency and Sufficiency is to individualize to a single source

The scale is based upon Locard's value of 12 matching Galton characteristics in type, location, and direction of flow as being absolute.

Weighted upon Locard's outer threshold of 40 pores (ridge features) in agreement to individualize, absent any Galton characteristics.

Ridge shape value : $40 \div 12 = 3.33$ per shape

Ridge shape values are rounded off to the lower whole number at the lower level of the quality scale.

Ridge shapes values rounded off are applied at the higher level of the quality scale as Galton characteristics decrease.

Ridge Features

- Ridge features are used to assess biological uniqueness below statistical level 2 probability thresholds
- A ridge feature is shape or path that is remarkable and it's use is based upon clarity and agreement of the remarkable ridge feature and is not influenced by:
 - Deposition distortion (pressure/movement)
 - Substrate distortion
 - Developmental effects (i.e. Ninhydrin- Fragmentary)
- Ridge features are not restricted to only one side of a ridge
- Each ridge feature has equal weight
- Diminishing values for areas of Core, Delta, and Pattern Force funneling of ridges, as formations of ridge features in these areas are less random, and influenced by the adjoining features

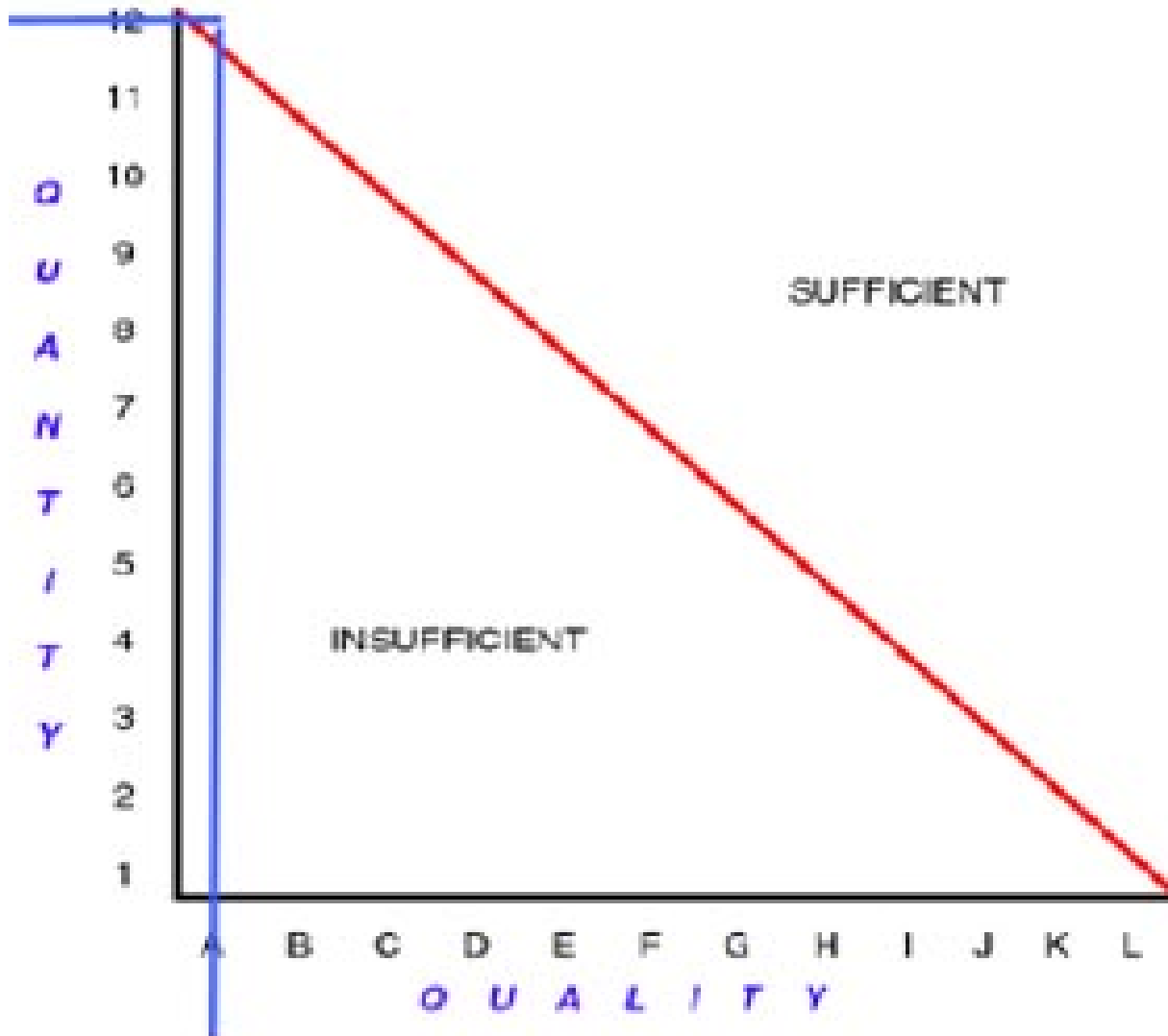
Level 2 characteristic types must clearly match.

For each detail type that is not clear, the quantity or quality requirement is increased by one.

Each Level 2 characteristic shape agreement counts as one ridge feature

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Delta and core area impressions-
Increase total values by 2: Two level 2 ; or one level 2 and 3 ridge features; or six ridge features.

Pattern Force in a funneling of ridges, increase total values by 4: As outlined above

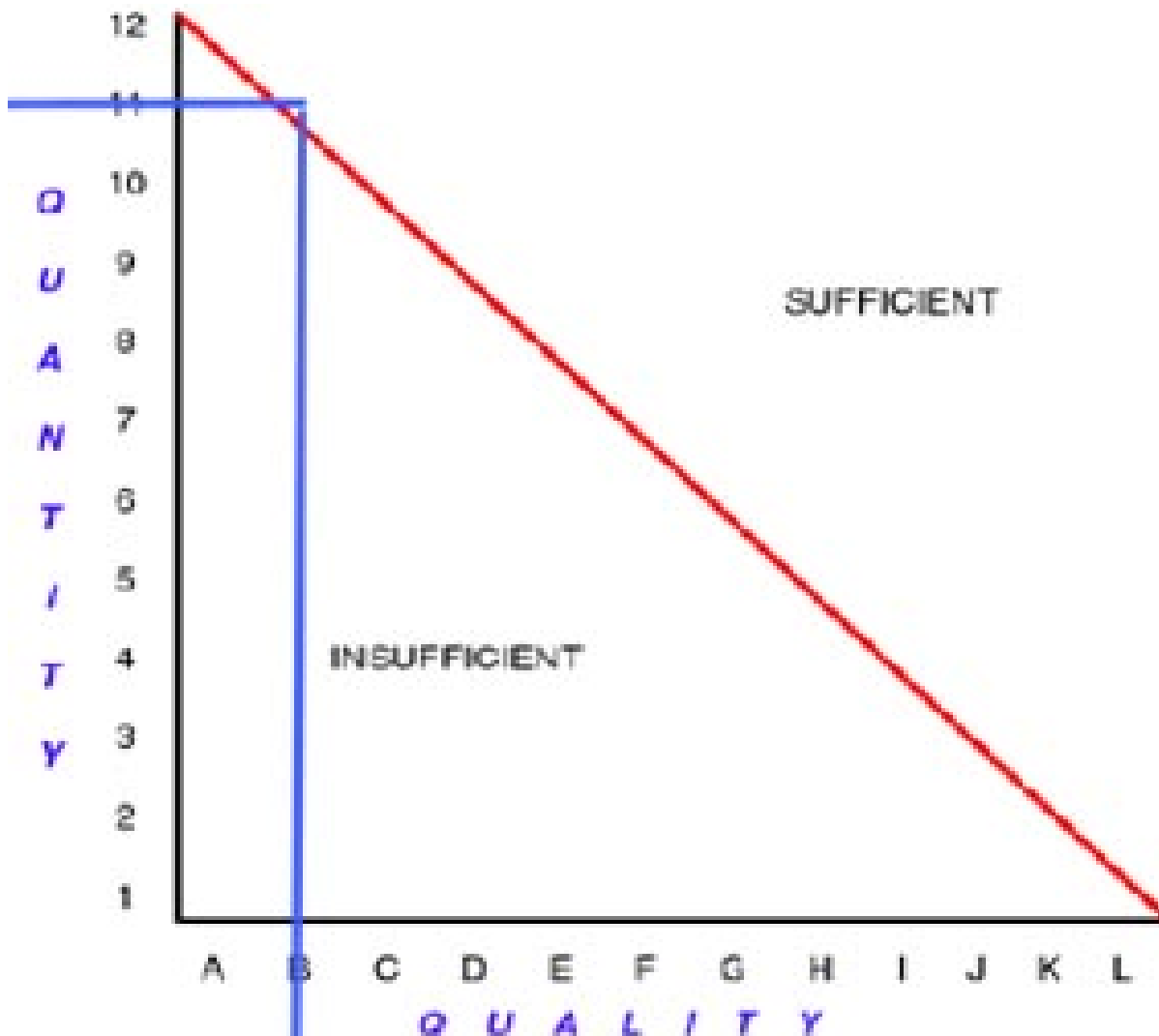
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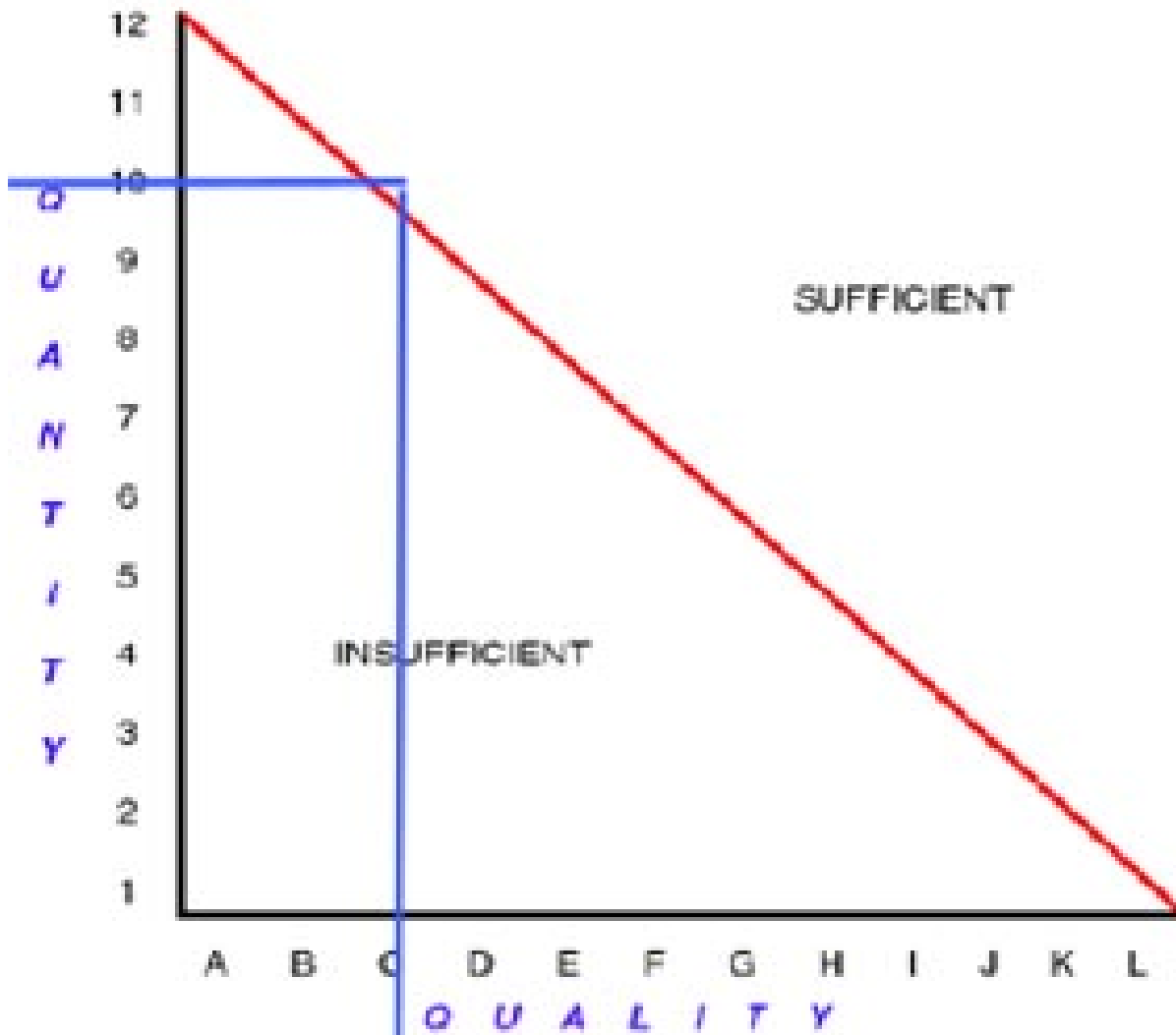
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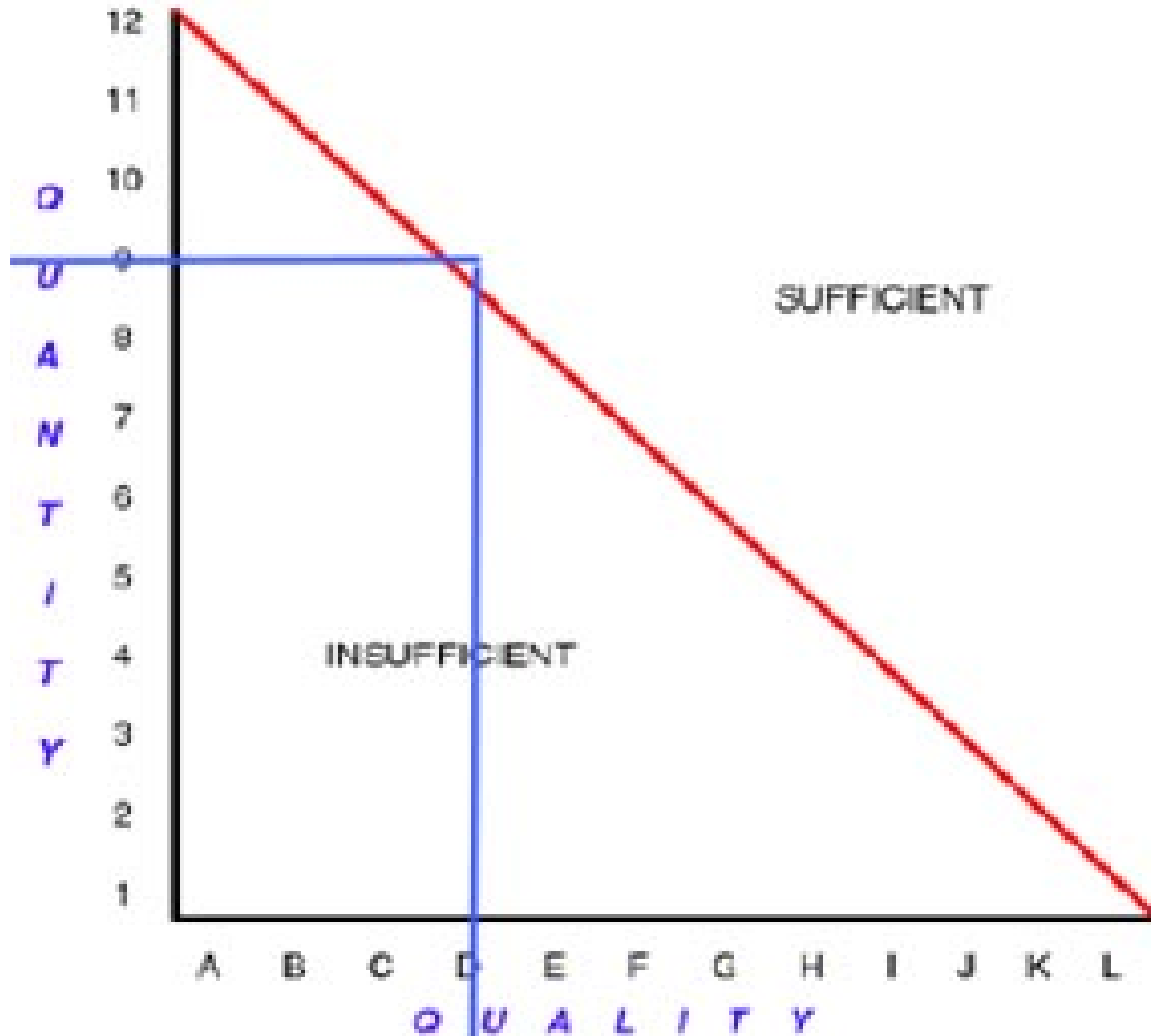
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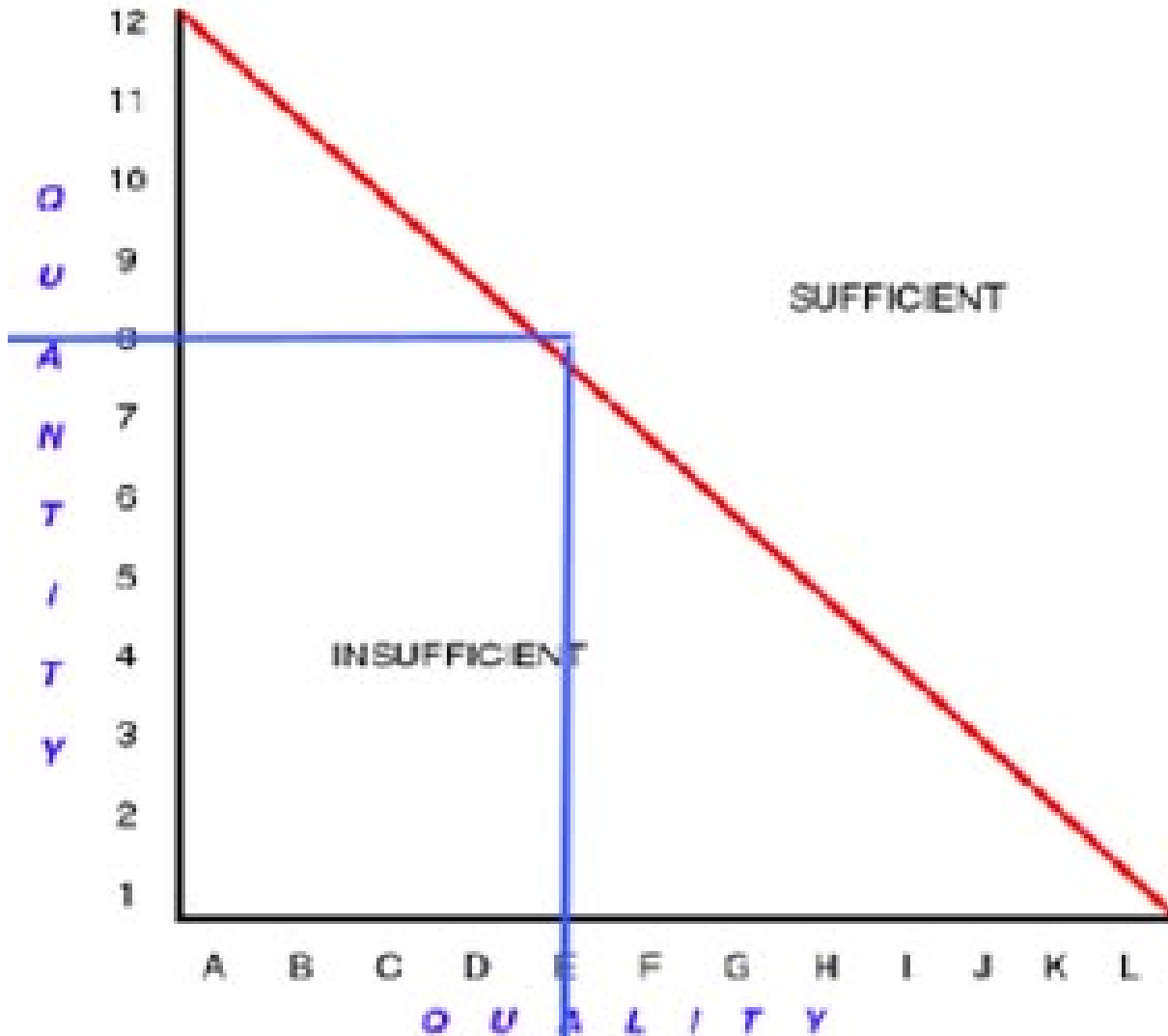
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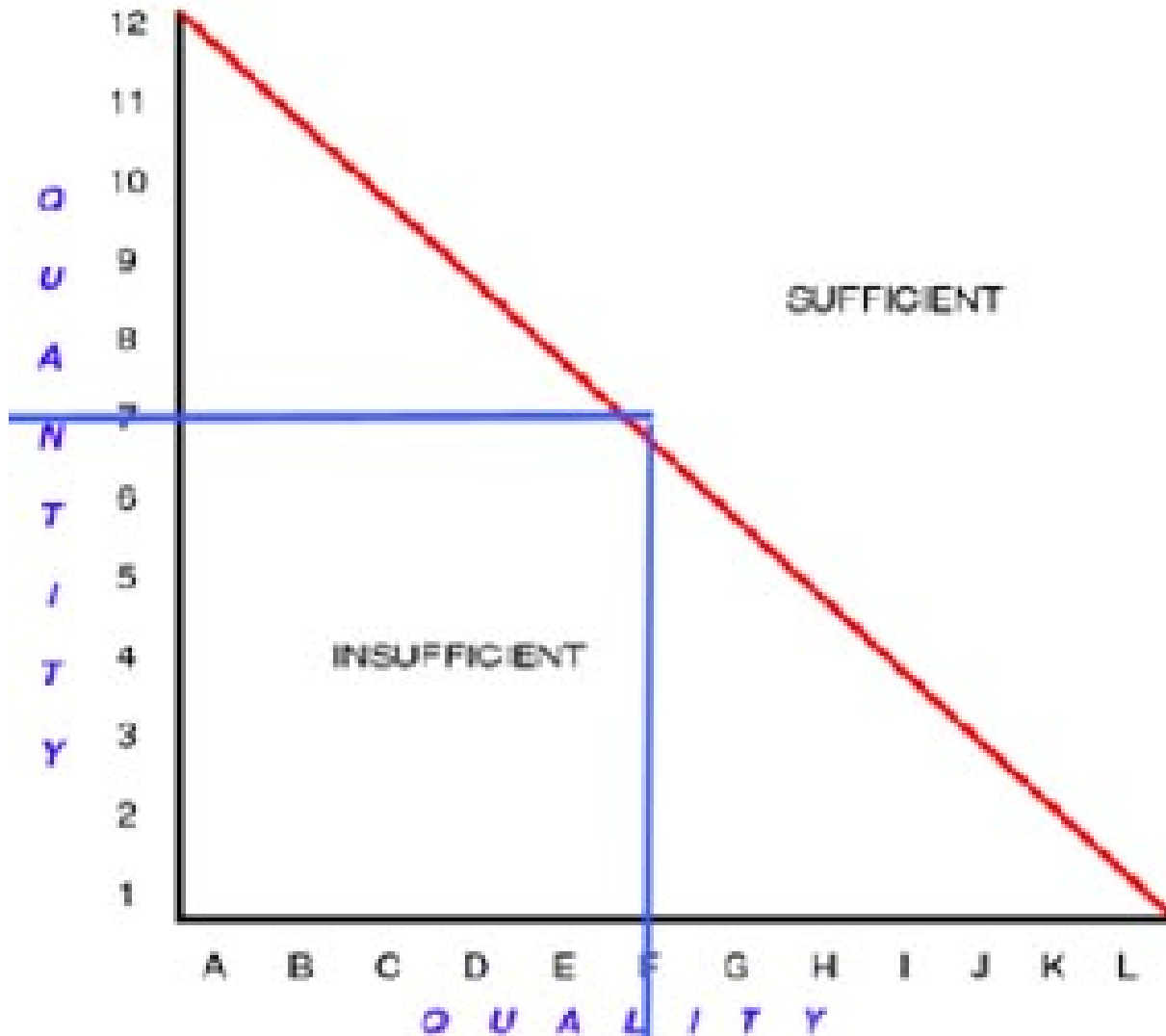
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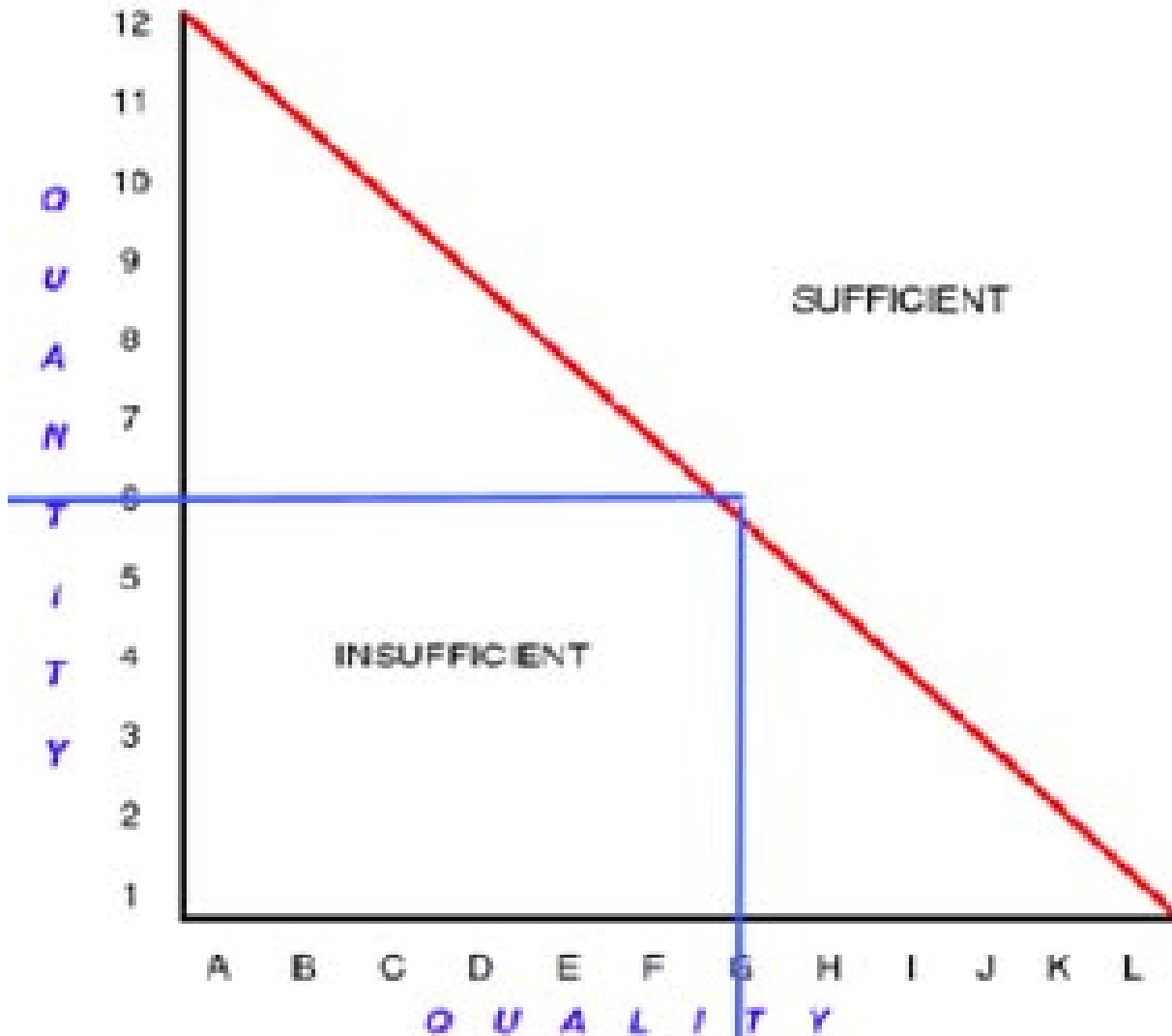
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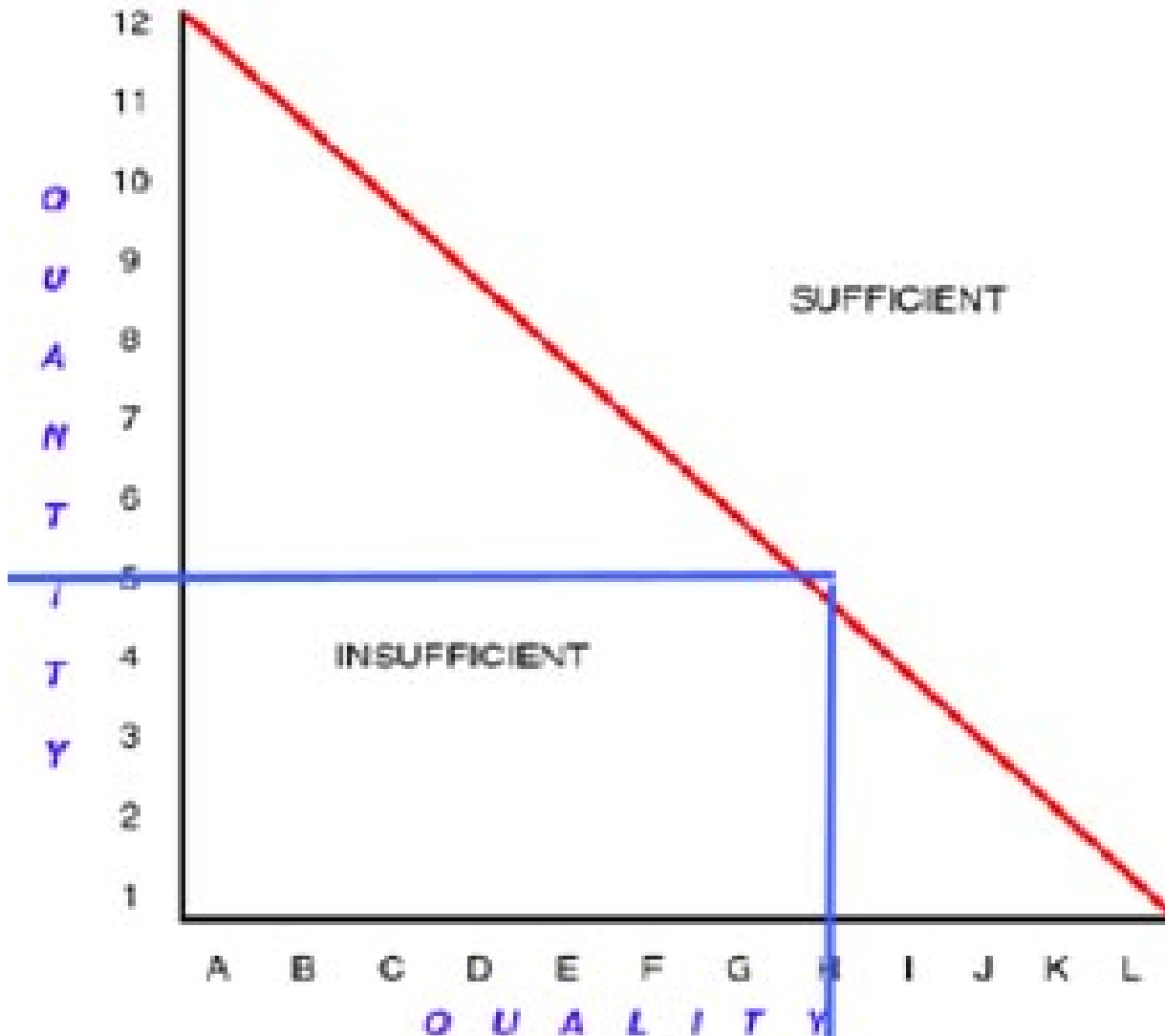
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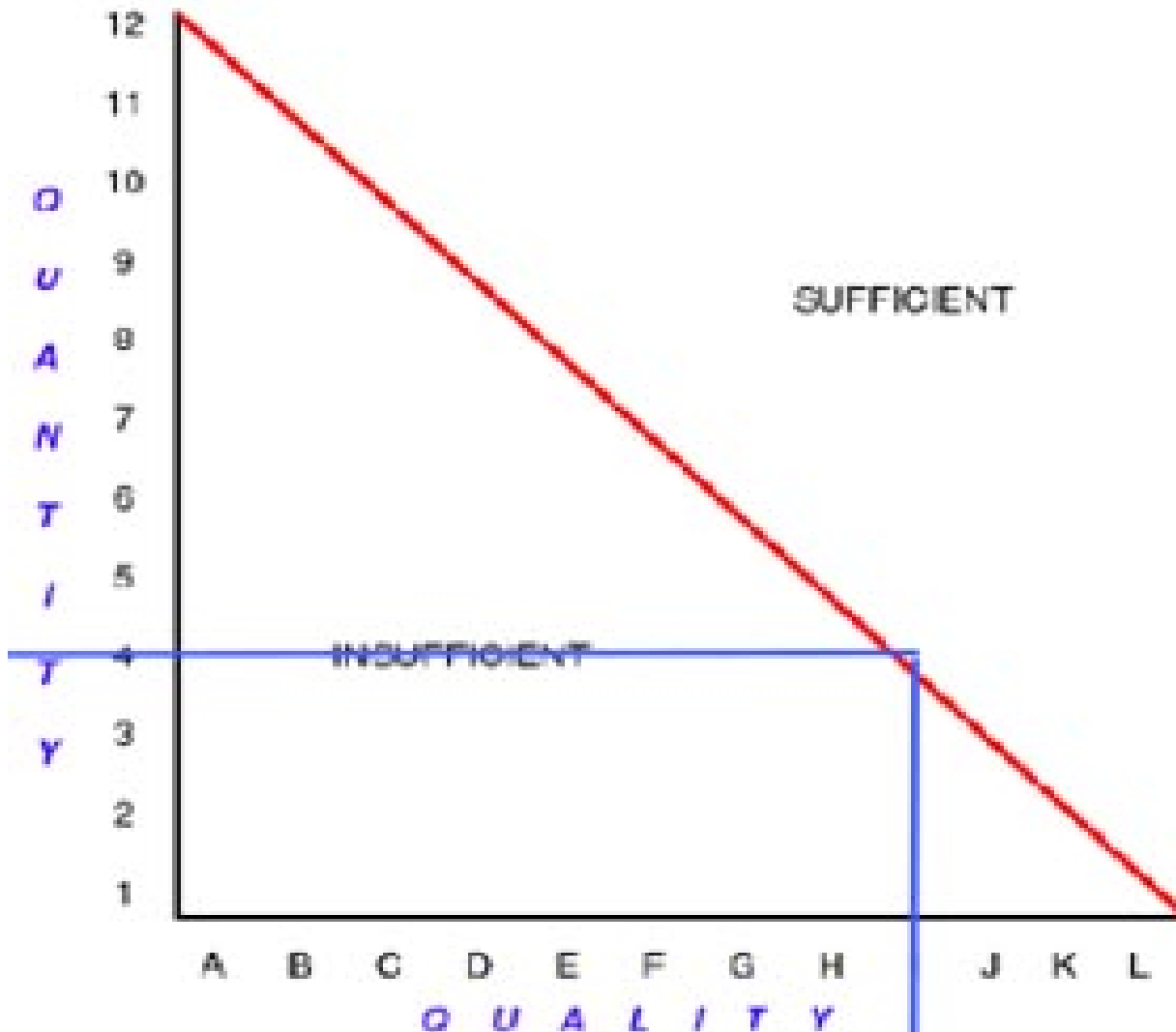
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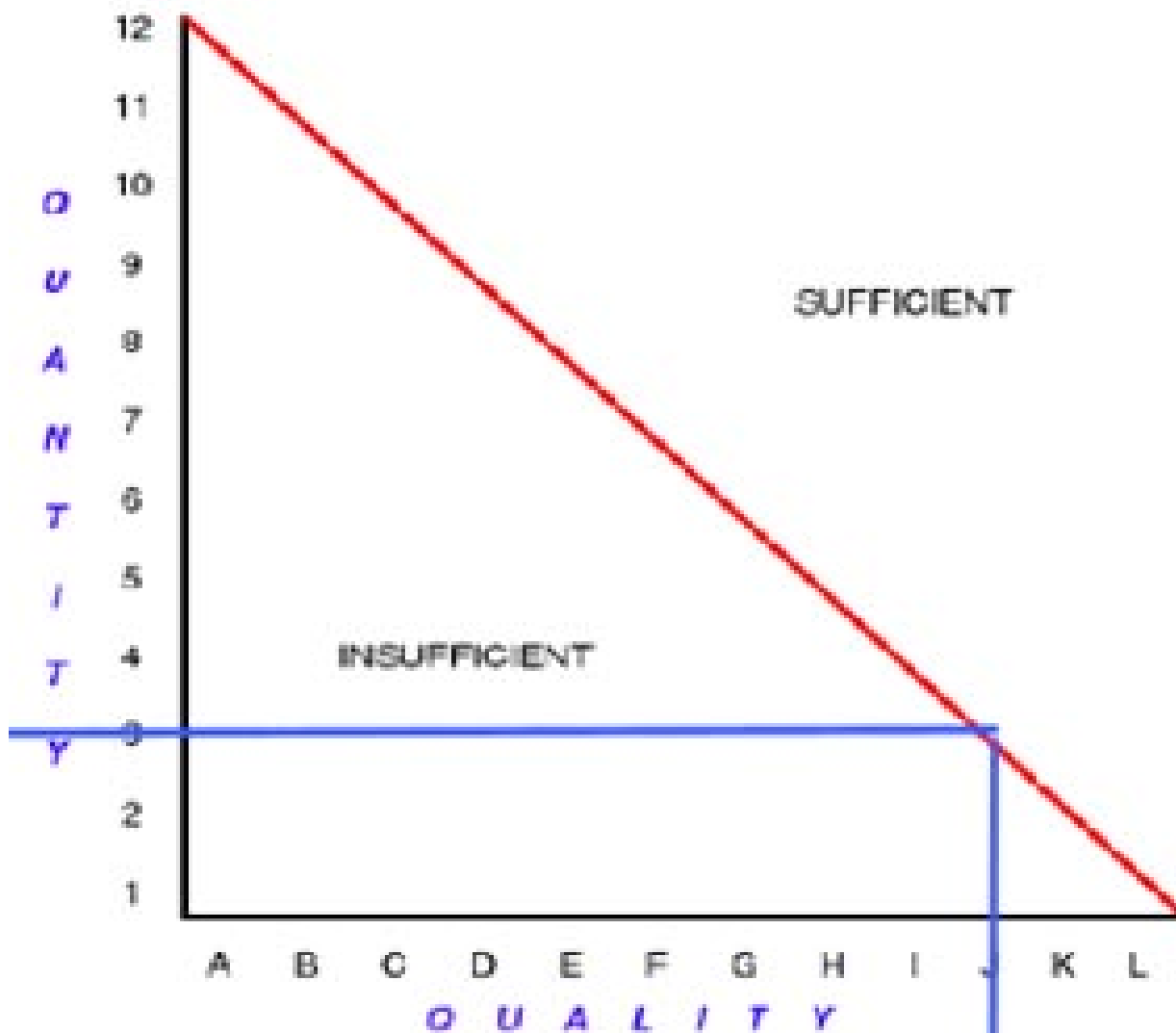
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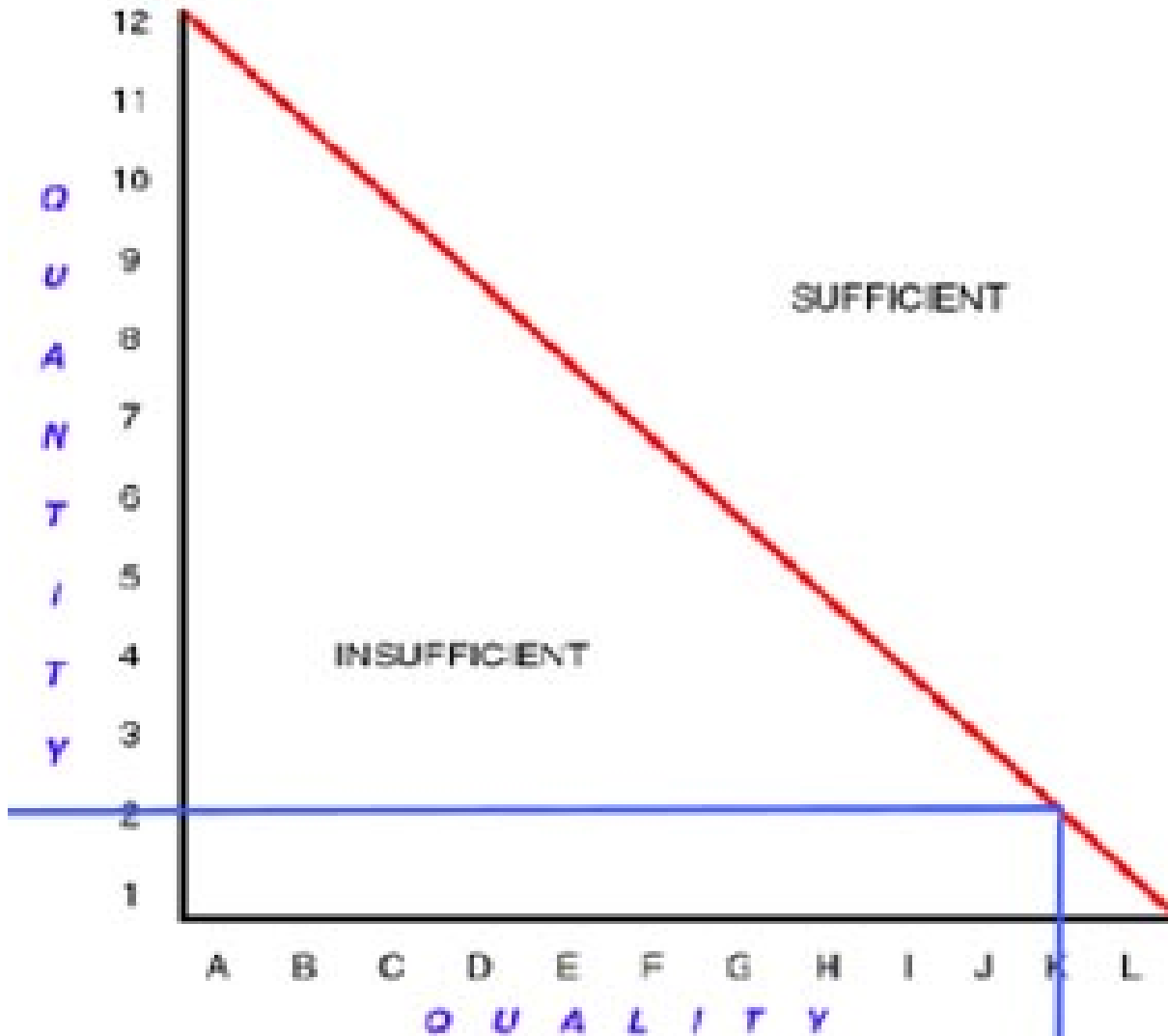
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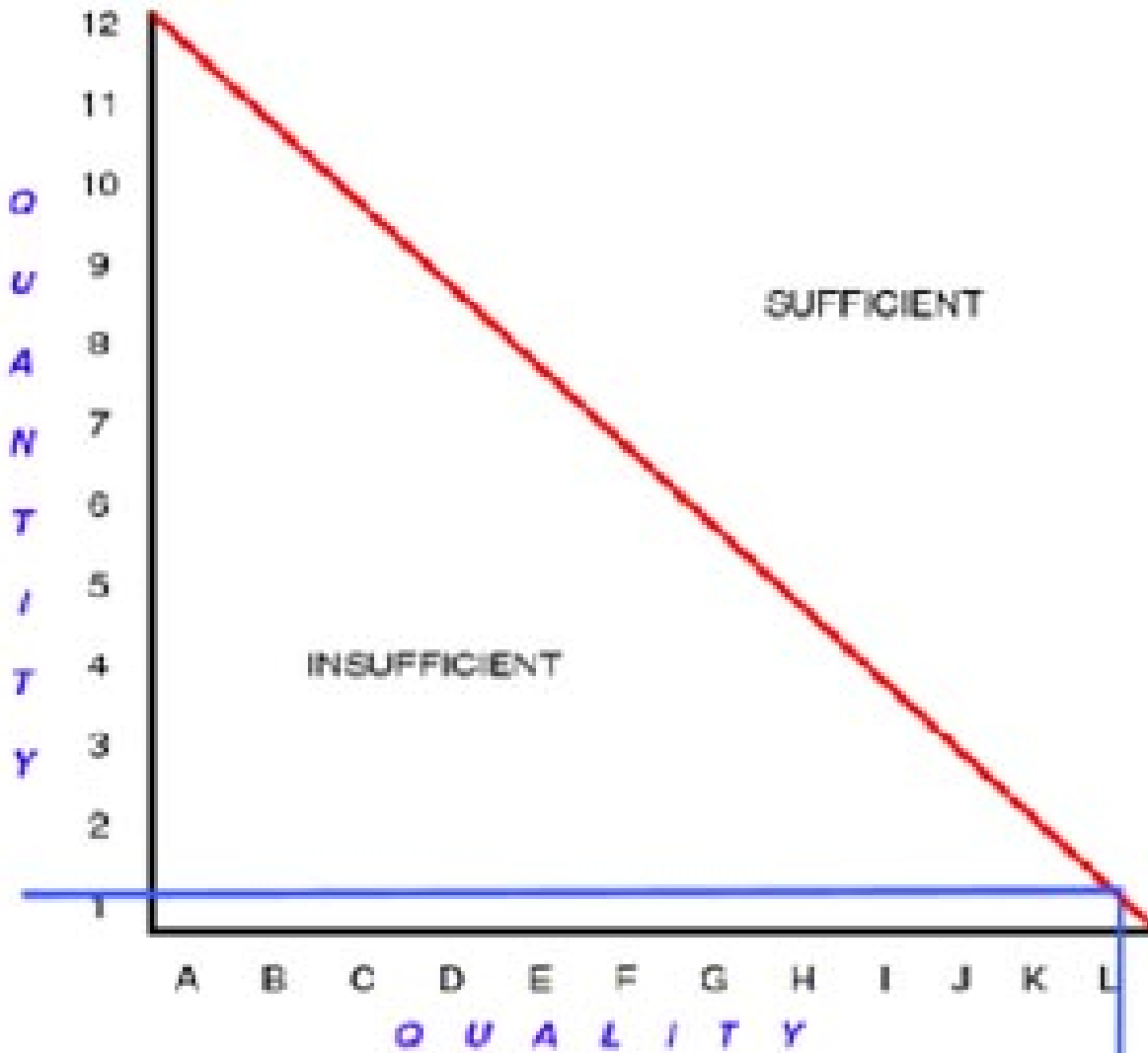
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