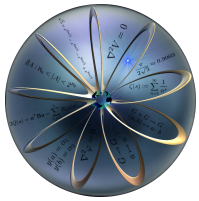

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characterisation

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In mathematics, *characterisation* usually means a property or a condition to define a certain notion. A notion may, under some presumptions, have different ways to define it.

For example, let R be a commutative ring with non-zero unity (the presumption). Then the following are equivalent:

(1) All finitely generated regular ideals of R are invertible.

(2) The $(a, b)(c, d) = (ac, bd, (a + b)(c + d))$ for multiplying ideals of R is valid always when at least one of the elements a, b, c, d of R is not zero-divisor.

(3) Every overring of R is integrally closed.

Each of these conditions is sufficient (and necessary) for characterising and defining the Prüfer ring.