



Mathematical Physics

A more "complete" version of the Pi-theorem: DRAFT

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The traditional Pi-theorem tells us that for any dimensionally invariant relation there exists a full set of independent dimensionless "Pi groups" which can be used to nondimensionalise the relation. In this paper, we seek to understand better the structure of dimensionally invariant relations and sets, by giving a complete characterisation of them in terms of independent dimensionless Pi groups. The traditional Pi-theorem only goes part of the way towards achieving such a characterisation. Our characterisation presented here can be viewed as the "complete Pi-theorem".

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