

But the sum in (2) is the n th difference of a polynomial of degree $i - 1$ ($< n$) and so is zero, and this completes the proof.

I am indebted to Mr. Quadling for suggestions that improved the first draft of this note.

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Correspondence

Sense of direction?

DEAR SIR,

On p. 232 of the October, 1973 issue your reviewer castigates the author of a book on vectors for omitting 'sense' from his definition of vectors. Is it implied that vectors with opposite senses have the same direction? The accepted meaning of direction includes sense and the inclusion of the latter in the definition of a vector is therefore unnecessary.

Yours faithfully,

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Reviews

The fabric of knowledge, by J. L. Jolley. Pp 130. £2.95. 1973. SBN 07156 07146 (Duckworth)

Today we are suffering from an 'information explosion', and our ability to deal with it depends to a large extent on the efforts of experts in information retrieval. Mr. Jolley is concerned with one aspect of this vast problem: that of developing an efficient natural classification of all areas of knowledge. The emphasis is on *natural* in the sense that a good system should grow out of the subject matter itself, and should be independent of arbitrary whims of the classifier. The book is devoted to scientific (from atomic to social) and mathematical knowledge, though one gets the impression that more speculative areas are thought to be no different in principle.

It seems that most notions from 'bicycle' to 'symmetry' and from 'photon' to 'nation' can be slotted into their natural place by asking a series of yes/no questions, thus coding that place by a binary numeral. The resultant scheme is indeed natural and satisfying, and the author has worked hard to convince his readers that this is so. It is still *a* natural classification rather than *the* classification, and for this reason I am unable to go all the way with Professor Kilmister's claim (in the foreword) that the rules are *independent* of the habits of the classifier.