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Subject: Re: Definition of Median was(Re: Finding the index of the median)

Posted by [Jack Saba](#) on Thu, 31 Oct 1996 08:00:00 GMT

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meron@cars3.uchicago.edu wrote:

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>
> In article <327771BA.2781@silk.gsfc.nasa.gov>, "Thomas A. McGlynn"
<tam@silk.gsfc.nasa.gov> writes:
>> In looking at the get the index of the median
>> value, I noted that the behavior
>> of the IDL median filter is not what I would have expected.
>>
>> E.g.,
>> print, median([1,2,3,10])
>>
>> prints out 3. This is independent of the order of elements
>> in the array. Is there an accepted definition of what
>> the median value is in this case. For example, I might
>> think 2.5 is a more appropriate choice (but one which would
>> have made the previous discussion incorrect).
>>
> No, median must be one of the elements of the set. 2.5 isn't such.
> The definition is, in principle "a value from the original set such
> that there are as many values below it as above it". Which cannot be
> fulfilled strictly if the number of elements is even. So in such case
> you decide arbitrarily (but preferably consistently) whether to pick
> the one above or below the dividing line.
>
> Mati Meron | "When you argue with a fool,
> meron@cars.uchicago.edu | chances are he is doing just the same"
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From CRC std math tables:

"When n is odd, the median is the middle value of the set of ordered data; when n is even, the median is usually taken as the mean of the two middle values of the set of ordered data."

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