

























3. For calculating value close to the center of the table prefer H L W K H U 6 W L U O L Q J V  
% H V V H O V IR U P X O D  
x If someone wants to interpolate a value of 'p' that is between  $\frac{5}{8}$  and  $\frac{7}{8}$  prefer  
6 W L U O L Q J V IR U P X O D  
x  $\frac{5}{8}$  V H % H V V H O V IR U P X O D interpolate for a value of 'p' between  
 $\frac{5}{8} = J$   
x By reminding all these rules one can easily make the right choice that in which  
problem which method is applicable.

#### 6. Applications of Interpolation in Real life:

As we know the method of finding values at unknown points using known values or sample points is known as interpolation, various practical uses of interpolation as follows:

1. The concept of interpolation can be used to estimate unknown parameters for any geographic point data, such as rainfall, noise levels, chemical concentrations, and so on.
2. Using interpolation techniques to zoom digital images: Image processing for low resolution digital images is a very challenging problem nowadays. It is difficult to avoid errors that occur in quantization and sampling. Zooming in on such images is extremely difficult. As a result, when zooming in on low resolution images, we use interpolation functions.
3. Interpolation is often used outside the domain of mathematics to scale images and transform the sample rate of digital signals.
4. Interpolation is helpful whenever you have to scale things up or down regularly. For example We may know how much food costs for 10 person event, 50 person event, or 100 person event, but we do not have a precise estimate of how much catering will cost for 25 people or 75 people. That's what interpolation allows us to achieve.

These are some of the examples of interpolation in real life as well as in other disciplines.

7. Observation of the Study Based on the observations and readings, it is concluded from this paper that Interpolation is mostly used to assist users, who may be scientists, photographers, engineers, or mathematicians, in determining what information may exist outside of their collected information. The comparative study of all the methods help to understand that how we can solve various problems by using the suitable interpolation method. Or how to make the right choice that which formula gives the result of the given problem more accurately.

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