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% Roll No: 207
% Batch: C3
% Date: 03-05-2023
% Name: Mohanish Khambadkar
% Assignment 7

% Lagrange's Interpolation Formula

% Que. - Using Lagrange Interpolation formula find the value of y at x = 10 by
using given table values.

x0=5;
x1=6;
x2=9;
x3=11;
y0=12;
y1=13;
y2=14;
y3=15;
x=10;

y=(( (x-x1)*(x-x2)*(x-x3)*y0)/((x0-x1)*(x0-x2)*(x0-x3))+ ...
( (x-x0)*(x-x2)*(x-x3)*y1)/((x1-x0)*(x1-x2)*(x1-x3))+ ...
( (x-x0)*(x-x1)*(x-x3)*y2)/((x2-x0)*(x2-x1)*(x2-x3))+ ...
( (x-x0)*(x-x1)*(x-x2)*y3)/((x3-x0)*(x3-x1)*(x3-x2)))

y =

    14.3333
```

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