

# Task#12

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## Spline Interpolation

1. Obtain the cubic spline for the following data:

$x$	0	1	2	3
$y$	2	-6	-8	2

2. What is Cubic Spline Interpolation? What is advantage of this method over polynomial interpolation
3. Estimate  $y(6.5)$  using Natural Cubic Spline Interpolation technique from the following data:

$x$	3	5	7	9	11
$y$	8	10	9	12	5

4. Find  $y$  at  $x = 8$  from the following data using Natural Cubic Spline Interpolation:

$x$	3	5	7	9
$y$	3	2	3	1