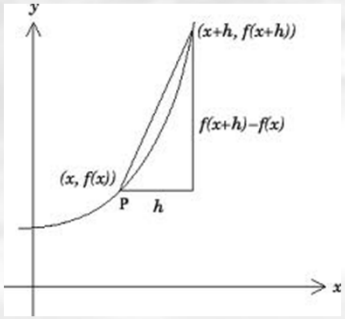
Differentiation

Audience Response Questions



http://nm.mathforcollege.com

1

The highest order of polynomial for which the central divided difference gives the exact answer for its first derivative at any point is

0

1

2

3

Total Results: 0

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

2

The highest order of polynomial for which the central divided difference gives the exact answer for its first derivative at any point is

0

1

2

3

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

3

The highest order of polynomial for which the central divided difference gives the exact answer for its first derivative at any point is

0

1

2

3

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

4

The order of accuracy of the central divided difference approximation

$$f'(x) \approx \frac{f(x+h) - f(x-h)}{2h}$$

Total Results: 0

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

5

The order of accuracy of the central divided difference approximation

$$f'(x) \approx \frac{f(x+h) - f(x-h)}{2h}$$

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

6

The order of accuracy of the central divided difference approximation

$$f'(x) \approx \frac{f(x+h) - f(x-h)}{2h}$$

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

7

Using central divided difference, the true error in the calculation of a derivative of a function is 32.0 for a step size of 0.4. If the step size is reduced to 0.1, the true error will be approximately

- 2.0
- 4.0
- 8.0
- 16.0

Total Results: 0

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

8

Using central divided difference, the true error in the calculation of a derivative of a function is 32.0 for a step size of 0.4. If the step size is reduced to 0.1, the true error will be approximately

2.0

4.0

8.0

16.0

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

9

Using central divided difference, the true error in the calculation of a derivative of a function is 32.0 for a step size of 0.4. If the step size is reduced to 0.1, the true error will be approximately

Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

10