max\_error.mac 1 / 1

```
(%i1) g(x) := 6*x + 2*(cos(x))^2 - 4*x^2*sin(x) - (5/x^2);
 (%01) g(x) := 6x + 2\cos(x)^2 + (-4)x^2\sin(x) - \frac{5}{x^2}
 (%i2) n: 2;
  (%02) 2
 (%i3) h: 0.5;
  (%03) 0.5
 (%i5) delta_g(x) := abs(diff(g(x), x, 3) * (h^(n+1) / (4 * (n+1))));
 (%o5) delta_g(x):= \left| \text{diff}(g(x), x, 3) \frac{h^{n+1}}{4(n+1)} \right|
 (%i8) delta g(x);
 (%08) 0.01041666666667
\left| 16 \cos(x) \sin(x) + 24 x \sin(x) + 4 x^2 \cos(x) - 24 \cos(x) + \frac{120}{x^5} \right|
 (%i9) wxplot2d([%], [x,1,5])$
  (%t9)
      1.6
      1.4
      1.2
         1
      0.8
      0.6
      0.4
      0.2
         0
                             2
                                    2.5
            1
                   1.5
                                                     3.5
                                                                      4.5
```

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