

Euler Method Approximation

Use  $y_{(n+1)} = y_n + h f(x_n, y_n)$ . Round each new y-value to four decimal places and use that rounded value in the next row.

1. Use Euler's method for  $y' = 1x - 1y + 1$ ,  $y(0) = 1$ , with  $h = 0.5$  for 4 steps. Round each new y to four decimals.

2. Use Euler's method for  $y' = -2xy - 1$ ,  $y(0) = 1$ , with  $h = 0.5$  for 4 steps. Round each new y to four decimals.

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Use  $y_{(n+1)} = y_n + h f(x_n, y_n)$ . Round each new y-value to four decimal places and use that rounded value in the next row.

3. Use Euler's method for  $y' = 1xy + 1$ ,  $y(0) = 1$ , with  $h = 0.5$  for 4 steps. Round each new y to four decimals.

4. Use Euler's method for  $y' = 2x + 0y + 2$ ,  $y(0) = 1$ , with  $h = 0.5$  for 4 steps. Round each new y to four decimals.