1.7: Numerical Methods: Euler's Method

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0.1 Method

Given a differential equation $f(x, y)$, take (x_0, y_0) as a starting point, and compute the derivative at (x_0, y_0). Then, take a predetermined step in the x direction and step in the y direction corresponding to the derivative, and repeat at the new coordinates. Errors will build up, and can be calculated by $E = |y_{actual} - y_{approximate}|$